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THE COVER—Our cover is a photograph of an etching of the new State Office Building at Albany, New York. The building was designed and built under the direction of Colonel Frederick Stuart Greene, Superintendent of Public Works of the State of New York, whom the Albany County Chapter of the New York State Society of Professional Engineers recently honored by conferring upon him an honorary membership. The etching is by David C. Lithgow.

THE AMERICAN ENGINEER will be happy to reproduce, from time to time, major accomplishments of its members, either in science or the arts, in politics or other fields.

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EDITORIAL . . .

CONFUCIUS WAS RIGHT

About 525 B. C Confucius wrote:

> "The ancients who wished to illustrate illustrious virtue throughout the kingdom first ordered well their own States. Wishing to order well their States, they first regulated their families. Wishing to regulate their families, they first cultivated their persons. Wishing to cultivate their persons, they first rectified their hearts, Wishing to rectify their hearts, they first sought to be sincere in their thoughts. Wishing to be sincere in their thoughts, they first extended to the utmost their knowledge. Such extension of knowledge lay in the investigation of things.
>
> "Things being investigated, knowledge became complete. Their knowledge being complete, their thoughts were sincere. Their thoughts being sincere, their hearts were then rectified. Their hearts being rectified, their persons were cultivated. Their persons being cultivated, their families were regulated. Their families being regulated, their States were rightly governed. Their States being rightly governed, the whole kingdom was made tranquil and happy."*

China has 5000 years of civilization behind it, yet its great philosopher, with the above statement, expresses a simple fundamental truth that applies with equal force to the basic problem which confronts any fast growing modern organization or society such as our NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS—namely, the strength of the Society is founded on the success of its Chapters.

Therefore, let each one of us concern ourselves actively with our local Chapter—take a part in its program in the community—express ourselves at its meetings—work on its committees—and above all, pay our dues.

And to officers of Chapters—we would urge that you let all your members know all the things your local chapter is doing. Although the committee method of functioning is efficient and should not in any way be reduced or minimized, yet we must keep in mind that each member of our Society is constantly asking himself two questions:

1. What am I getting out of my Professional Society?
2. What am I putting into my Professional Society?

And to most members, the first is more important than the second.

Yes, Confucius was right! "Their States being rightly governed, the whole kingdom was made tranquil and happy."

* From "Confucius Said It First" by Dr. Tehyi Hsieh (Courtesy of G. Webber Knight)

Welcome Maryland, Tennessee and Arkansas

To the Professional Engineering Societies of Maryland, Tennessee and Arkansas:

GREETINGS:—

The formation of the Maryland, Tennessee and Arkansas Societies of Professional Engineers within the last month, followed by their admission to the federation of State organizations known as the National Society of Professional Engineers, is a significant and gratifying indication of the appeal of the professional society movement in this country. As President of the National Society it is a privilege to be accorded the opportunity of extending to these new units a cordial welcome to the councils of the Society.

The policies and decisions of the national body are those of its member organizations. That the latest members of the professional family will play an active role in its affairs is the intent of the national constitution and the hope of the national officers. Each of the new societies has certain problems that affect the Engineers of that State. Some are even vexatious to the extent of demanding immediate consideration. The National Society stands ready to render whatever assistance it may be capable of. However, the sovereignty of the State organization is indisputable and N. S. P. E. can only work through and in response to the request of the State Society.

Engineers of Maryland, of Tennessee, of Arkansas, you have taken the first step toward a unified professional status in your commonwealth. You have the right to represent the profession in your several States. With the aid of proper laws you can perform a real service to the public and to your calling. Be careful not to forfeit the privilege and the distinction that ranges you with the bar and medical societies of your States. Seek the company of, and encourage exchanges and cooperation with, the other professional organizations enjoying the distinction that is now yours. Foster the formation of County Chapters, extending the utmost in self regulation to these units, for they are the real backbone of the professional movement. Urge upon them the value of close relations with local officials. Civic groups, press and other professions. It is through them that legislators can best be advised of the thoughts and hopes of Engineers. Above all, avoid alliances with other so-called engineering groups, which never are strictly professional organizations and which can never secure public recognition or official sanction as spokesmen for the profession. Join with or maintain personal membership in such groups but do not, as a Society, become a unit thereof. The formation of so-called engineering councils has been fostered during the last several years. Such groups are, generally speaking, heterogeneous organizations. Any affiliation or association as a unit can only serve to lower standards and will deprive the professional society, national, state or county, of its undisputed role of leadership and its recognition as the profession's spokesman. It is a compliment to the professional society movement that the technical societies are now seeking to imitate by attempting geographical and political forms of organization. However great the compliment may be the so-called council idea has neither jurisdiction for existence nor hope of recognition as a representative of Engineers. The professional organization should, of course, maintain cordial relations with all groups and lend assistance whenever possible, but, as a matter of common interest to public and profession, it should avoid any affiliation that would submerge it in a sub-professional and non-professional group. Like unto Caesar's wife, the professional society must be above suspicion. The opportunity for prestige and recognition carries with it an equal obligation.

Maryland, Tennessee and Arkansas, the National Society again extends its hand and its greeting. Best wishes for a constant growth of membership and influence. The sacrifice that you are making will one day be justified. Your success will rebound to the benefit of the people and the profession in each of your several States.

Cordially yours,

ARTHUR V. SHERIDAN,
President, National Society of Professional Engineers.

NATIONAL SOCIETY NEWS

News Letter

To the BOARD OF DIRECTORS of N. S. P. E.

I am indeed happy to advise that three additional State Societies have been organized, chartered and affiliated with NSPE within the past three weeks. Thus there are now 23 State Units in NSPE. You received notice regarding the Maryland Society of Professional Engineers. Directly after organizing the Maryland Society the writer promoted and organized the Tennessee and the Arkansas Societies of Professional Engineers, attended the West Virginia Society Annual meeting, and carried on promotional work in the other states as indicated herein.

WEST VIRGINIA—The Fifth Annual Dinner Meeting of the Charleston Chapter of the West Virginia Society of Professional Engineers was held at the Daniel Boone Hotel on March 26. The Board of Directors meeting was held in the A. M., followed by the afternoon meeting and a dinner meeting in the evening, attended by approximately 250 persons. The writer addressed the afternoon and evening meetings relative to the philosophy and accomplishments of NSPE.

KENTUCKY—The writer attended a conference at the University of Kentucky on March 28 with President Terrell and Secretary Crouse of the Kentucky Society of Professional Engineers, at which the recently enacted Engineers Registration Law was discussed, together with plans for promoting membership in Kentucky.

TENNESSEE—Engineers and architects are the only professional men in the State of Tennessee in business who have to pay a privilege tax in the amount of $150 a year so we were advised. The Tennessee Society of Professional Engineers, which was organized by NSPE at the Vanderbilt University on March 31, will direct its attention to this as well as other pertinent matters.

ARKANSAS—The writer addressed meetings of the Little Rock Engineers Club, following which the Arkansas Society of Professional Engineers was organized and chartered by NSPE, at the Hotel Freiderica, Little Rock, Arkansas, on April 9th, having an initial membership of 25.

LOUISIANA—While in Shreveport, the *Shreveport Journal* reported the following with respect to illegal practice of engineering: "A charge of engaging in the practice of the profession of Civil Engineering and Surveyor without having registered with the State Board of Engineering Examiners was lodged against R. N. Milwee here on Monday at the office of District Attorney Jas. U. Galloway. Milwee's bond was fixed at $250."

MISSISSIPPI—Promotional work has been instituted in the State of Mississippi, and we look forward to early activities from this location.

ALABAMA—A promotional campaign has been instituted in this state and we look forward to the furtherance of NSPE philosophy within this territory in the very near future.

RHODE ISLAND—I am indeed happy to advise that the Rhode Island Society of Professional Engineers has succeeded in having an engineers license law enacted, and that the Governor signed the bill on April 23. Thus there are now 40 states and 3 U. S. Possessions wherein professional engineers license laws are now in effect.

WILLARD S. CONLON,
Executive Secretary.

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National Society of Professional Engineers

To Be Represented at Dedication

The National Society of Professional Engineers was invited to participate in the ceremonies upon the occasion of the dedication of the Franklin Institute in the State of Pennsylvania in honor of Benjamin Franklin, May 19 to 21, 1938 in Philadelphia, Pennsylvania.

N. S. P. E. was represented by the Pennsylvania Society of Professional Engineers.

Welcome Arkansas

A state unit of the National Society of Professional Engineers was organized by 25 Little Rock engineers at the Hotel Freiderica recently following the weekly luncheon of the Little Rock Engineers Club.

The unit, to be known as the Arkansas Society of Professional Engineers, was presented its charter by Willard S. Conlon of Washington, executive secretary of the national body.

Temporary officers appointed by Joe F. Mayne, chairman of the meeting, were: Leonard N. White, president; Kenneth W. LeFever, secretary-treasurer; Fred Herring, national director.

Membership will be limited to engineers registered under the Arkansas registration law.

Enforcement of existing registration laws, their enactment in the 10 states yet without them, and the unification of the several branches of engineering are objectives of the national society, Mr. Conlon said.

"The organization is assuming the same position held in society by the medical and legal associations," he said. Formed in 1934, it has chapters in 23 states and 5,300 members.

Committees Named

Committees of the Little Rock club were appointed by Mr. Mayne, vice-president who presided, in the absence of Col. John R. Fordyce, president.

They are: Entertainment—Virgil Buckley, chairman; Drew Lander, Mr. Herring, E. M. Shaw; Finance—A. M. Lund and Haskell Dickinson; Membership—W. Terry Feild and George Fry; Publicity—J. E. McCook, Jr.

M. Z. Bair and Mr. Conlon spoke.

The Engineering Profession Today and Tomorrow

An Address Delivered to the Student Body of Tri-State College, Angola, Indiana, by SULTAN G. COHEN, Engineer of Construction of State Highway Commission of Indiana, and President of the Indiana Society of Professional Engineers

It is the purpose of this talk to attempt to give a bird's-eye view of the engineer's position in the world of affairs. To make that picture complete, would necessitate a survey of world conditions. However, suffice it to say that the engineer feels the limitations of a retarded economy, depression, recession, or whatever your political complexion prompts you to call it; along with other professional and business men.

Ours is truly a technical age. The fruits of our science are apparent at every turn. Though there has been marked development in the arts, medicine, etc., it is the engineering developments of our age that really distinguishes it from all other ages. It is the ramifications of rapid transportation, rapid communication, rapid industrial production, and even rapid extermination that marks our age as different. These same things, too, have made necessary social adjustments that are a part of our economic problem.

The world has welcomed the engineer's achievements. Each invention has contributed to the comfort and convenience of man. Man has been elevated from a life of drudgery to one of ease with a host of inanimate servants to do his bidding. Yet the human being and human nature have changed but little during this same period. Surely there is a demand in this scientific era for the continued service of the engineer to guide, to maintain, and to further develop this product of his own handiwork.

Man is slowly but surely adjusting himself to the world of today; though he gropes through a maze of social, economic, and governmental adjustments with the reverberations of doomed bigotry, controlled economies, and nationalistic jingoes marking the way. There is no doubt in the intelligent mind but that we are in a period of transition. We of the democracies already recognize that our goal is "the more abundant life." When the adjustments are accomplished and the goal attained, the world will be in a position to enjoy and appreciate the fruits of our science and the engineer must be available to meet the demand.

But what of the young engineer during this trying period of transition? The opportunity to serve, that was the lot of his predecessor in the profession, is denied the young engineer. Whereas the expanding frontier demanded the civil engineer to build its railroads, its cities, and highways; the mechanical engineer its machines and vehicles of transportation; the electrical engineer its power and means of communication; the chemical engineer its refineries and reductions; and the mining engineer its exploitation of natural resources, does the future indicate enough of all these things? *I think not.* "The abundant life" surely means a maximum of all these services. When that demand does come another generation of engineers, schooled in the sciences, but better prepared than its predecessor with an appreciation of the human problem, must be available.

In my own generation, I have seen the motor vehicle create a demand for highways and witnessed the development of the rural highway from the "horse and buggy" stage to the intricate thoroughfare of today. When I entered the highway industry in 1919, the demand was for miles of surfaced roads. Attuned to the demand of the times, we constructed the miles of surface in a speedy and economical manner for the type vehicle and speed limit of that day. But a changing world has rendered that structure as obsolete as the vehicle it accommodated. The staggering toll of death and destruction on our highways, today, is chargeable, in part, to the presence of a 1938 vehicle and speed on a highway structure whose grade and alignment still fits the Maxwells and Model "T's" of a departed age.

The traffic on our highways continues to increase in number and to change in nature. The passenger vehicle shows no decrease in speed or numbers and the motor truck vies with the tractor and trailer to haul commodities. There is still the demand for additional miles of surface but in addition comes a greater demand for safety and sanity in additional width, divided lanes, grade separations, and longer sight distances, that mean grade and alignment easements. That demand has been articulate despite depression and has not been satisfied by the heroic efforts of an emergency public works program. The present and future holds plenty to keep the highway engineer busy. His only limitation is the readiness with which the funds can be made available for his purposes.

In the early days of the highway industry, we engineers were engaged in design, construction, and maintenance, only. Today those same functions demand additional numbers and the engineering control of soils, materials, traffic and roadside development have made their advent. Research engineers are developing improved construction methods, materials, and equipment. Plan engineers are studying the conditions of the present and the future to avoid the pitfalls of the past.

The highway industry is but one of many that will continue to demand technical personnel for a long, long time. Of course, there is a limit to the ability of any industry to absorb indefinitely and at all times but the demand is a continuing one.

I have discussed the highway industry in detail because I am more familiar with that field of endeavor than any other. However, the construction industry in general is probably more inviting.

There is a steady and continuing demand for various types of housing. Funds are being made available, on attractive terms, to individuals and groups for housing purposes. Normally, such a healthy demand coupled with availability of funds means an active construction program, and I am sure that it can not be long delayed.

Flood control, with attendant construction of reservoirs, levees, and dams, promises a program for the very near future. Railroad development awaits some adjustments in financial structure, but surely will demand adjustment of both rolling stock and road bed, shortly. Many are the cities that are now in need of sewage treatment and water purification plants, in addition to extension of all types of public utility services.

A recent report of the National Resources Committee, entitled Technological Trends and National Policy offers considerable food for engineering thought. The effect of new inventions on both the industrial and social struc-

ture of the nation is clearly pictured. The fact is well established that approximately thirty-five years usually elapse between the advent of a basic invention and the development of a resulting industry. At the beginning of the twentieth century, comparatively few telephones were in use; the automobile was just making its public appearance; the motion picture was still an experimental toy; the airplane was not taken seriously; radio was still a theory; and rayon but a dream. However, the basic ideas were all in existence in 1900.

Today, a number of major basic inventions are available and in the embryo stage. Herewith is submitted a partial list of such inventions—the mechanical cotton picker, air conditioning equipment, plastics, the photo-electric cell, artificial cotton and woolen-like fibres made from cellulose, synthetic rubber, prefabricated houses, television, facsimile transmission, the automobile trailer, gasoline produced from coal, steep-flight aircraft planes, and tray agriculture. Each of these and many others will require whole groups of engineers for their development. So the engineering profession does still have a demanding responsibility and an expanding field.

Webster defines "Profession" as a "Calling or vocation, especially one that requires a learned education." Surely Engineering qualifies under such a definition.

Engineering is one of the oldest of the professions. It is truly a learned profession. Yet its practitioners have never definitely established their professional status, in the public mind. Collectively, we have a degree of public acceptance, but individually we are slow to identify ourselves. This situation is peculiar to the engineering profession and one from which it is suffering. In recent years, the engineers have attempted corrective measures and the young engineer can well afford to be acquainted with the movement.

The idea is not original with the engineer or the engineering profession. For years the medical profession has required its practitioners to pass a state board examination and secure a certificate or state license to practice. Before such examination is given the State Medical Board satisfies itself that the applicant has qualified himself by training experience to practice his profession. Likewise, the legal profession requires its practitioners to be admitted to the bar before entering public practice. The dentist and the accountant must meet certain legal requirements in most states. Such laws protect the public in those states from the practice of the professions by the unqualified.

In an effort to protect the public from the practice of engineering by the unqualified and at the same time to acquire a degree of public recognition for the engineering profession, Engineer Registration Acts have been enacted in some 38 states. Indiana has had such a law since 1921.

Many of you may still labor under the delusion that you are prepared and ready to don your professional attire as soon as you are graduated and have obtained your coveted degree. Such an attitude is only partially correct. Graduation from a recognized engineering school does furnish the necessary background of training; this coupled with four years of experience and the satisfactory passage of a State Board Examination, does entitle one to his certificate, license, and title of "Professional Engineer." Such is the law in Indiana and you will find similar regulation in most of the states.

As I have previously stated, Indiana has had such a law since 1921. Some 1300 engineers are now registered under the Indiana Law. That number, however, does not include all the practicing engineers of the state. It probably does not include more than half of the qualified practicing engineers of the state. The unlicensed half are principally in industrial employ and practice their profession either in blissful ignorance of the existence of such law or in defiance of its enforcement. Practically all engineers engaged in public work are registered as are most prominent engineers that attract public attention.

An educational program is now in prospect to acquaint all engineers with the requirements of the law. As soon as the qualified engineer is acquainted with the fact that registration distinguishes him from the unqualified and places his professional status on a legal basis, he is not slow to act. However, contact between engineers and various groups of engineers is more difficult to establish than that between foreign nations.

One would assume that the engineers would organize to meet the situation and make themselves both effective and articulate through organization. Evidently that has been their desire and intent for through the years they have developed technical organizations of every kind and description. They have organized vertically, horizontally, diagonally and criss-cross. It is difficult to find an engineer, who has engaged in active practice for any length of time, who has not participated in more than one attempt to organize to meet his problems.

However, from the maze of organizations a modern pattern is now emerging. The so-called Founder Societies have definitely established their right to nurture the advancement of science in their particular fields and to disseminate technical literature on current engineering developments. Whereas, matters pertaining to the material welfare of the engineers as a group, including the establishment of his professional status, is ably handled by the much younger state organizations affiliated with the National Society of Professional Engineers. These state organizations are called to your attention and are worthy of your affiliation and support, when you are qualified for membership.

Recent industrial developments have their affect on the status of the engineer. Under keen competitive conditions, some industries have seen fit to do the necessary engineering to design a structure or machine and absorb the engineering charge, in order to make a sale. That industry soon considers its engineers as unproductive, producing an expense that must be held at minimum. Such absorption by industry is not to be desired. A corporation cannot practice a profession properly.

Labor unions have become important in the industrial scene. When the vertical type union organized whole industries, they naturally found some engineers who could not qualify as executives, and hence were almost forced into union affiliation. Some specialized groups welcomed such union affiliation. Experience in Ohio showed the development of a wage scale for brick layers at $1.75 per hour and .87½¢ per hour for the technical union member. Such wage discrimination and the conditions of union organization are hardly conducive to the best interests of the profession, or the individual.

The engineer is not content to be absorbed by industry, and he will not bow to exploitation by organized labor. That leaves him but one alternative—his professional status. Therein lies his industrial strength, his legal strength, his pride and hope for the future. His professional consciousness has dawned; his *modus operandi* is through the Engineer Registration Acts and the professional organizations. Therein lies the hope for the future of a great profession. We, the engineers of today, have preserved the professional ideal; we have sought and acquired a legal background for our professional status; we have provided professional organizations, as vehicles for our united efforts. These are our working tools. A grand tradition, a noble vocation, an honorable profession is your inheritance. May you "carry on" in a more abundant manner for "the more abundant life."

Legal Steps Forward

Report of SAMUEL I. SACKS, Chairman of the Legislative Committee of the National Society of Professional Engineers

Two cases have been decided by our Pennsylvania Courts recently which are of extreme interest to engineers in general.

In the first case, that of John C. Neill et al, and the Pennsylvania Optometric Association versus Gimbel Bros., (decided on March 21, 1938 by our State Supreme Court), the plaintiffs, individually, as licensed optometrists, and as trustees of the local and state Optometric Societies brought a Bill in Equity against the defendant and also against several other department stores in Philadelphia, to enjoin them from the practice of optometry, directly and indirectly.

In the lower court, the defendants were enjoined from holding themselves out as optometrists, by advertisement, sign or otherwise, and from practicing optometry.

The plaintiffs were not satisfied with the decree, appealed and urged that the decree should be enlarged so as to specifically prohibit defendant from employing licensed optometrists to examine the eyes of its customers. The lower court stated that the statute licensing optometrists does not make it unlawful for a licensed and duly registered optometrist to contract with an individual, firm or corporation to examine the eyes of such persons as may request it, and further that the Act does not make it unlawful for an individual, firm or corporation to advertise to the public that they may procure such services as they may require from a duly licensed and registered optometrist with whom such individual, firm or corporation has contracted.

The appellate court said that the facts were not in dispute and are as follows: That the course of study is from two to three years and that the defendants lease a portion of their department stores to optometrists who operate an optical department, at a rental which includes a definite sum plus a percentage of the gross annual business and further, that the name of the department store should only be used in advertising, and that a definite sum should be used for advertising.

The defendants had the right to hire and fire the optometrists, and received all the fees, and then made distribution to the optometrists whom they employed.

The appellate court also said that the "defendant does not hold a certificate of licensure to practice optometry, and, as a New York corporation, does not have the right to practice." Quoting from the appellate court further, "we think the chancellor, who found as a conclusion of law that optometry is a profession, took a somewhat restricted view of what optometry is when he said the practice of optometry is essentially a mechanical process."

The appellate court quoted a Michigan case and said "The difficulty with appellant's entire position is its belief that optometry is merely an incident to its corporate merchandising business. It overlooks the fact that optometry has become a real science, * * *" requiring the study of mechanics, physics, physiology, pathology, etc. The Court went on to say as follows: "The rule is generally recognized that a licensed practitioner of a profession may not lawfully practice his profession among the public as the servant of an unlicensed person or a corporation; and that, if he does so, the unlicensed person or corporation employing him is guilty of practicing that profession without a license. A corporation as such cannot possess the personal qualities required of a practitioner of a profession. Its servants, though professionally trained and duly licensed to practice, owe their primary allegiance and obedience to their employer rather than to the clients or patients of their employer. The rule stated recognizes the necessity of immediate and unbroken relationship between a professional man and those who engage his services. It was applied recently in this Commonwealth in the case of lawyers."

In conclusion, the Court said as follows:

"We conclude the decree should be modified so as to provide that the defendant be prohibited from the practice of optometry, directly or indirectly, and from employing registered optometrists to examine the eyes of its customers."

The word "optometry" could be changed to "engineering" and would exactly fit conditions as they exist in the field of engineering.

In the second case, that of the revocation of a certificate of license of Mr. Blank,* as a professional engineer, was decided on April 4, 1938, by the President Judge of the Court of Common Pleas of Dauphin County, the seat of the Pennsylvania State Capital.

The facts in that case briefly were as follows: In 1930 Mr. Blank filed an application with the Registration Board upon which a certificate of registration was issued. In 1935, a complaint was made stating that "Mr. Blank in his application grossly misrepresented his educational qualifications and professional experience and swore to false statements in his application; that the falsity of his statements were shown under his cross-examination and the testimony of other witnesses in a hearing before the Public Service Commission of Pennsylvania in 1934." Blank was notified in writing of the complaint, and made a request for specific charges, which were furnished to him, and a hearing had in December of 1935. In January of 1936 his license was revoked. In February of 1936 he requested a rehearing, which was granted, and after many postponements, in December of 1936 the Board found as follows:

"Mr. Blank has been guilty of the practice of fraud and/or deceit in obtaining his certificate of registration in 1930.

Therefore the State Registration Board for Professional Engineers unanimously orders that the revocation of the certificate of registration as professional engineer of Mr. Blank stands revoked as of January 17, 1936."

An appeal was taken to the Court of Common Pleas of Dauphin County, as required by the Registration Act of Pennsylvania, and a hearing had *de novo,* in which all of the previous testimony was submitted and additional evidence heard. The Court said as follows:

"We do not deem it necessary to review this evidence. The Board has rested its determination upon the answer given by Mr. Blank as to the nature and extent of his education and the falsity of the answer with reference to Engagement No. 2. If the Board had known the facts as they have now been disclosed, we are satisfied that a certificate of registration would not have been issued,

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** We are deleting the name of the person from whom a license was taken, in order not to embarrass him further. We will call him Mr. Blank.*

and it follows that there was fraud and deceit practiced upon the Board."

In conclusion, the opinion reads as follows:

"Upon appeal a large amount of testimony was taken in this Court to show Blank's practical experience, and to explain the answers in his application. This testimony does not satisfactorily explain the apparent misrepresentation in his application and it is not necessary to base any extended findings on it.

The conclusion is irresistible that Mr. Blank was guilty of fraud and deceit in making the untrue statements in his application, both as to his education qualifications and as to his practical experience listed under Engagement No. 2 in said application.

We recognize that our decision in his case is final, and therefore we were liberal in the receipt of testimony in the hope that an explanation could be given that would satisfy us that the Board erred in the conclusion to which it came or that the facts would justify us in reversing the Board. We also recognize the hardship which the order of the Board imposes upon the appellant, but we must take into consideration that it is of the utmost importance that any Board for the licensing of members of any profession should keep the standards high so that professional ethics and conduct may be above reproach and that men should not be admitted to the learned professions who have not the proper conception of right, justice and ethics. The evidence in this case shows that the statements were false. Blank's evidence given before the Public Service Commission shows a studied attempt to avoid telling the truth about his educational qualifications and from it we are bound to conclude that he did not have the conception of right and ethics which the standards of his profession require. We are of opinion that the Board was right in maintaining those standards although the action may fall heavily upon one who violates them.

This happens to be the first case which has come to this court of appeal under the Act of May 6, 1927, P. L. 820. It would be an unsound precedent for the Court to reverse the Board when we find as we have, that fraud and deceit have been practiced in securing an application.

For these reasons we come to the following conclusions of law:

1. The Board had sufficient evidence to justify it in the exercise of its discretion to revoke the certificate of registration issued to Mr. Blank.

2. In ordering such revocation the Board was not guilty of any abuse of discretion.

3. The decision and ruling of the Board should be sustained.

Now, April 4, 1938, the decision and ruling of the State Registration Board for Professional Engineers ordering the revocation of the certificate of registration as a professional engineer of Mr. Blank as of January 17, 1936, is hereby affirmed and the appeal is hereby dismissed at the cost of the appellant.

(sgd) WM. M. HARGEST, P. J."

CHANGE OF ADDRESS

If the address at which you receive your AMERICAN ENGINEER has been changed, notify the Executive Secretary (*not* the Editor) without delay!

—Don't Forget—

All notices of change of address should be sent promptly to:

WILLARD S. CONLON
Executive Secretary
National Press Building
Washington, D. C.

Virginia Society of Professional Engineers

E. J. F. WILSON, *President*
J. S. MILLER, JR., *Secretary*

MEETING AT
UNIVERSITY OF VIRGINIA
SATURDAY, MAY 14, 1938

10:30-11:00 A. M. Registration, Thornton Hall.

11:00 A. M. Morning Session, Thornton Hall.

E. J. F. Wilson, President, Virginia Society of Professional Engineers, presiding.

Introductory Remarks: Mr. Wilson.

Welcome: Dr. John Lloyd Newcomb, President, University of Virginia.

Address: Arthur V. Sheridan, President, National Society of Professional Engineers.

Business Meeting.

1:30 P. M. Luncheon Farmington Country Club.

Address: Walter S. Rodman, Dean, Department of Engineering, University of Virginia.

3:30 P. M. Reception and Inspection1Thornton Hall.

The laboratories of the Engineering Department open for inspection. A number of interesting exhibits and demonstrations arranged. An excellent opportunity to visit one of the most modern and completely equipped engineering laboratories in the South.

LADIES' PROGRAM

Arrangements made to take the ladies on a tour of the University grounds and a trip to Monticello, returning in time for the luncheon and reception.

ELEVENTH ANNUAL MEETING
of the
NEW YORK STATE SOCIETY OF PROFESSIONAL ENGINEERS
HOTEL COMMODORE—NEW YORK CITY
Lexington Avenue and 42nd Street
FRIDAY, MAY 20 and SATURDAY, MAY 21

SESSIONS: The session on Friday opening at 2 P. M. with discussions of topics of importance to the profession. Followed by a meeting of the Executive Board in the evening. On Saturday at 10 A. M. the Society conducting the regular business of its annual meeting, adjourning at 12:30 for luncheon and resuming its regular session immediately thereafter.

LUNCHEON: In the Main Ball Room—Saturday, May 21st at 12:30 Addresses by outstanding speakers. This year there is a Seating List for the Luncheon.

ALFRED E. ROCHE, President
FREDERICK H. ZURMUHLEN, Vice-Pres. and Chairman of Arrangement Comm.

ATTENDANCE COMMITTEE
CHARLES W. BURKE, Chairman
GEORGE A. DORFMAN, Vice-Chairman

Opportunities for Graduates of Engineering Colleges

By **RALF R. WOOLEY, Salt Lake City, Utah**

The title of this discussion is purposely broad because specialization has created over 50 branches of engineering, and occupations in these branches have become so different that the extremes bear almost no resmblance to each other; furthermore, opportunities in the various branches are many or few depending upon types and locations of industrial development. For example, in regions where mining and metallurgy are important industries, there is work for mining, metallurgical, and geological engineers, and limited opportunities for the civil, electrical, mechanical, and chemical engineers; where manufacturing is the dominant industry, mechanical and electrical engineers are likely to be found in greater numbers; and in other localities opportunities are most numerous for civil engineers.

Engineering is the subject of many definitions, but the one which I like best is that worked out some years ago by engineer Gano Dunn, Past-president of the American Institute of Electrical Engineers. He says—"Engineering is the art of the economic application of science to social purposes." This not only includes the engineer, as described of old, as "a man who can do with one dollar what any fool can do with two," but it implies that he must also apply his knowledge to social service. Thus the factors of culture, personality, and ethics that have long been neglected in professional training are essential to the properly qualified engineer.

Let us consider for a few moments some of the more common things embraced in these neglected factors. For example, it once seemed to be traditional that when one entered college to study engineering he must immediately assume the role of a "roughneck"' be rather forward in his manners, not too neat in his appearance, and in every way convey the impression that he is one of those individuals who spend their lives in their "field clothes." To have a desire for good English or for public speaking was just too much refinement; and too much refinement in personal habits was apt to brand one as a "sissy." Little do engineering students realize the handicap of this fallacious conception of an engineer. Many a graduate never knows how many employment opportunities he has lost because of some uncouth mannerisms that he may have believed were characteristics of engineers.

Happily there is a strong trend in our colleges today to give engineers more of that cultural training that has been so lacking, and Mr. Dunn says that—

"If an engineer's training neglects the great human mirrors of history and languages, particularly his own language; if his mind and heart are not sensible to the great social forces of his day and of his community; if he but feebly develops the subtle qualities of character that make for personality, his career as an engineer is limited, no matter how much science he may know."

He further points out that "the social sphere today is still a field that needs the light, a field in which the engineer with his training and point of view has open to him doors of rare opportunity."

To my mind the problem of engineers is qualification, and it has been my observation that graduates from different colleges are not equally qualified to assume engineering responsibility and fully comprehend the work in hand. Much of this inequality, I assume, is due to methods of training and the experience of the trainers. Because of my keen interest in this subject I recently sent letters to a number of engineering colleges requesting information relative to the employment situation among the engineer graduates, what qualifications are expected by the employers, and what assistance if any the school gives to the placement of its graduates. Examples of the replies to those letters are of particular interest at this time. For instance Dean Dearborn of the School of Engineering and Industrial Arts at Corvallis, Oreg., writes that—

"The usual specifications required of our graduates by the larger engineering companies are that the candidates be in the upper one-fourth of the class in scholarship, with reasonable qualifications in personality, health, industry, etc. This does not mean that we place only one-fourth of our class at the time of graduation, for our figures show from 60% to 80% placed at that time.

Neither Oregon State College nor the School of Engineering such has a regular placement officer. The responsibility for work rests largely with the head of the department concerned, to whom the correspondence on such subjects is referred. In the case of civil service examinations, some special help is given the student in the way of sample examination questions in his particular field."

From the State of Washington Dean Loew writes—

"Generally speaking, the industries that employ our graduates in engineering and geology expect applicants for positions to have two important qualifications: first, they expect them to have demonstrated by the high quality of their work in college that they are well prepared in the fundamentals of their profession; and, second, they are expected to have a high degree of integrity, pleasing personality, and the ability to cooperate agreeably with their associates. As I see it, the qualifications can be summed up into two words, scholarship and personality. Any graduate who possesses these two desirable characteristics in a high degree seldom has difficulty in locating a suitable position. My experience of the past two or three years indicates that there is always a shortage in graduates of the highest qualifications.

"At the University of Washington the faculty of the College of Engineering participates actively in securing places for their graduates. Each major department has an individual who is definitely assigned to placement work in that department. In addition to that, our office contacts numerous industries that seek to employ recent graduates. Through these contacts arrangements are made to have employment representatives visit the University and interview graduating seniors. Last year representatives of 14 different industries interviewed students on the campus.

"We keep constantly in close touch with industry to determine what specifications they require in graduating seniors and make every reasonable effort to meet these rquirements."

These letters clearly show that something more than pure academic training is essential to a qualified engineer, and the fact must not be overlooked that there "is always a shortage in graduates of the highest qualifications." It is gratifying to know that the cultural and the practical

sides of an engineer's training are being given serious consideration not only in the colleges above cited but throughout the country. The extent of which each college is actively doing something, however, is by no means a fixed standard, and one will find all intensities, varying from "lip service" to well organized plans and active organization. Naturally, the colleges which show the most practical and effective results are those whose faculty members are in close contact with the practical problems of their fields of specification. This vitalizes the teaching of each member and provides helpful opportunities for his students. It also maintains and develops his professional competence and stimulates and encourages his research activities. Only through such contact, in a service relationship, may the University meet properly the demands, public and private, for assistance which it is uniquely equipped and staffed to perform in the public interest.

The value of a properly safeguarded program of research and consultant relations with business and industry and all other agencies maintained for the public benefit is undisputed, but there is always the element of personal gain which must be properly defined, and for this purpose some colleges, and quite recently the Ohio State University, have adopted a set of sound and sensible regulations in this matter.

Not long ago the National Committee of the Engineering Council for Professional Development undertook a survey of engineering colleges which, upon request, were appraised as to their undergraduate curricula. The University of Utah requested that it be rated by this Committee, and Dean Ketchum, in the editorial columns of the February issue of the *Utah Alumnus,* announced that the School of Mines and Engineering of the University of Utah is on the list of accredited engineering schools with five engineering curricula, namely, civil, electrical, mechanical, mining, and metallurgical engineering. He says—

"We are proud to be on the above accredited list, especially since we have learned that a large number of schools were rejected by the Committee, but in order to keep up with the high standards set by the National Committee it will be necessary to increase our teaching force and add considerably to our laboratory equipment."

We of the alumni are equally proud with Dean Ketchum of the fact that our *alma mater* is among the accredited engineering colleges. However, we are a little concerned about the "but" part of his statement, especially in view of the fact that Utah is a state of limited population and wealth and the appropriations granted to our institutions of higher learning are based upon student enrollment, which develops a competitive situation that may easily become impossible. Thus I feel sure that in case money is not forthcoming to do all the things the Dean says are necessary, we are all agreed that our accredited standing must not only be maintained but improved by a wise selection of students and the raising of standards for graduation to the end that we may achieve distinction by the quality of our graduates rather than by the large number of them. It is not a question of more engineers but better qualified ones. Obviously, the graduates from a non-accredited college would have a difficult handicap to overcome in professional competition.

In passing, it is interesting to note that in the list of 107 accredited colleges as of October 1, 1937, there were only two, namely, Colorado School of mines and the Montana School of Mines, that received accredited ratings in geological engineering. One college advises that it makes no attempt to place graduates in geology after taking a four-year course, stating, "They must obtain their Master's degree to have any chance to secure employment, and it is not easy to find jobs for them then. A Doctor's degree is a practical necessity in geology."

As to the need for engineers and other socially desirable occupations, income seems to be the best measure we have, and after spending eight years in surveying sixteen selected occupations, Dr. Harold F. Clark of Columbia University came to the conclusion recently that the present estimated value of an engineer's career is $95,300, with a working life span of 43 years. Medicine ranks first with a value of $108,000, law is next with $105,000, dentistry with $95,400, and then engineering. Doctor Clark observes that—

"Although the professions may seem to be very badly crowded, in the light of the incomes of unskilled labor, farming, and even of skilled labor, there is no doubt that by aad large the professions need more people in them. Professional service is a type of service that people are willing to pay more for because it is scarce."

I might add, however, that the scarcity is commonly in the brackets of highest qualifications and, as the old saying goes, that "there is always room at the top."

A few months ago the Bureau of Labor Statistics of the United States Department of Labor completed a survey of earnings of engineers, covering returns from 52,589 engineers. It is interesting to note some of the findings of that survey.

In 1929, 50 percent of the engineers reporting earned more than $3,412 and 50 percent earned less than that amount per annum. Twenty-five percent earned more than $5,012 and 10 percent had incomes in excess of $7,466. On the other hand, 25 and 10 percent of the engineers earned respectively less than $2,509 and $1,878 a year.

In 1929 without regard to the age distribution of the different classes, 10 percent of the mining and metallurgical engineers earned more than $9,912 a year, chemical and ceramic engineers ranked second with 10 percent earning more than $9,103, and were followed in order by mechanical and industrial engineers($8,508), electrical engineers ($7,185), and civil engineers ($6,507). At the upper 25 percent level, mining and mentallurgical engineers reported earnings of $6,301 per annum, and those of the other professional classes ranged from 4 percent lower for chemical and ceramic engineers to 28 percent lower for civil engineers.

Over the period 1929 to 1934, when all earnings shrank considerably, the smallest shrinkages were reported by the civil engineers, while the chemical and ceramic engineers suffered the greatest cuts.

The earnings of engineers in the lower income levels ceased to increase at a relatively early age, whereas the higher levels of income showed continuous increase for a considerably longer period, after which they declined at a much greater rate.

Consideration of different educational backgrounds showed that those with a formal engineering education received a higher income. At about 28 years of age the "other" engineers had lost an initial advantage in earning capacity.

With advancing age the spreads in earnings in favor of the graduates became very marked. For example, at 5, 20, and 37 years after graduation the earnings of first-degree mechanical and industrial engineers exceeded by $175, $925 and $1,322 a year of the engineers of the same professional class whose college course was incomplete, and surpassed by $225, $1,160, and $1,815 a year those of engineers with a non-collegiate technical school education.

It is noteworthy that at no time was direct relief extensive among engineers during the depression, but available engineering opportunities did not keep pace with the

(Continued on page 14)

One-Type College Doomed, Says Pitkin

By **WALTER B. PITKIN, Professor of Journalism, Columbia University**

Editor's Note: Dr. Pitkin raises an interesting and serious question on the future of American Colleges. We know of at least one college, which until recently offering an engineering course, is discontinuing it. Probably such a college can find food for thought in the suggestion to turn from a purely professional school to a Technical or trade school.

In hard times only the strong survive. If all American colleges and universities continue their present policies for the next quarter century, fully 450 of them will pass from the scene by 1960. The physical equipment will remain but the activities within the ivy-clad walls will not constitute what we know today as college life and functions.

And of the 745 listed colleges and universities in America today another 150 will survive as such only through becoming marginal institutions, with lowered standards to tap the supply of borderline students who will go to a college whether or not it is the best thing for them.

The remaining 150-odd institutions will survive, some improving, some holding their own as a result of academic, social-economic, or geographical qualities.

This will be no tragedy. Foresight of the trend may well result in the salvation of institutions now struggling pitifully along under an outmoded concept which survives only through the force of tradition.

There is not room in tomorrow's America for 745 colleges and universities of the standard American brands, comprised today chiefly of liberal arts, agricultural, and technical institutions. The liberal arts college, far in the majority today, will continue to have its place in education, but not ever in its present over-expanded form.

That a shake-up in the colleges will come is inevitable. Population no longer grows as of old. Soon it will be stationary. Frank Bowles, '28C, '30AM, director of Columbia admissions, has cited his findings of a falling off in public school attendance and prophesied the collapse of or lowering of standards in colleges depending upon student fees for existence. With fewer high school graduates fewer candidates will seek admission to the colleges.

But other trends are also at work. The marginal colleges face their downfall for many complex reasons, chief among which are:

1. A relative decline in opportunities formerly monopolized by college students.

2. Increasing opportunities for highgrade people to do work calling for only average abilities.

It is no secret that the liberal arts degree holds little charm as an entree to employers, aside from the professions. The battle for jobs grows grimmer. It is the first thought of the public school graduate. America's youth as a group cannot afford to spend four years for a general education. The better colleges are themselves the leaders in pricking the myth that a bachelor's degree is a certificate of employment. As youth becomes more and more conscious that experience is the best entering wedge into non-professional employment, applications for college admission will continue to decline. Eventually we will see that happy day when only those who should be in college will be there.

Not only will those ill-fitted for college soon stay away, but high-grade people who formerly made good subjects for advanced education are finding more and more that in the struggle for a livelihood they can do well by hitching their wagons to a planet instead of a star. And the best planet is the one they live on. By stepping down a rung on the ladder they find, in the fields formerly below their dignity, that it is easier to compete. He who might have made a fair lawyer yesterday may now abandon the law degree and enter a business concern, where part of his duties may entail legal advice, yet where he will never practice law. And he will get a four-year advantage over his schoolmates who go on toward the college degree.

Again the better colleges are leaders in the trend. The Columbia Law School is, perhaps, the top-notch discourager of prospective degree-holders. Unless he has definite promise of high attainment in law, no candidate is permitted to enter that professional school. In the past ten years the Law School has forcefully whitted its attendance down in an endeavor to accept and graduate only those who are assured of success. This must become the iron rule in every professional school. The world demands better graduates and fewer.

What qualities determine the survival of tomorrow's college? The quality of teaching ranks high here. Advantages of location have their obvious merits. High grade institutions in great population centers need not fear the future. Other survivors may be found among colleges having special social-economic status and connections. Since, regardless of their service, institutions tend to survive as long as they can exist, financial support will continue to figure largely. The best state universities can and will continue, as will the colleges carried through adequate church support. Private institutions will depend upon the number of good scholarships or endowments by alumni.

What of the 450-odd colleges doomed through lack of quality and support? Their doom should be welcome, since they exist in their present form without reason. They perform no service.

But their buildings and grounds will continue to be, and many of them may become boarding schools. Probably most of those which fail to act soon will end up in that category if they do not close their doors altogether.

But there is a service which they could easily perform, a service which is needed.

Marginal colleges should get away from the idea of the one-type college. Each one, individually, should and can enter a new, non-competitive field.

The educational field is glutted with the standard college, yet starved for specialized schools of many types. The blind, the deaf and the crippled are in need of more and better training facilities. Industrial schools supplying apprentices in industry are scarce, and mostly focussed upon the broader industrial fields such as engineering and mining.

Specialties abound and increase today. Those destined to reach the top of their professions still require the broader outlook, but he who will be an aviator, or a roofing salesman, or an air-conditioning expert or an advertising layout man and go not far beyond the $4,000 a year class can only find scattered classes and imperfect courses in the larger schools.

Four hundred and fifty small colleges facing obliteration could and should find four hundred and fifty non-competitive, modest specialities where there will always be a demand and where they can always serve those who would learn.

What could they do? The large business schools prepare men for high executive positions. Other phases of business life are neglected by our educational institutions. Most youngsters who head into business do not rise to high executive positions, though most of them do aspire to be more than secretaries. Yet our business colleges of today are classed into two brackets, the secretarial schools and the schools of economic theory. The great middle bracket which should produce competent junior executives is almost non-existent. Liberal arts colleges which are now going under while attempting to pay the mortgage on their stadia would do well to enquire into the feasibility of a new type business school, specialized to the extent that it teaches mainly practical phases of the type of work which a junior executive will do.

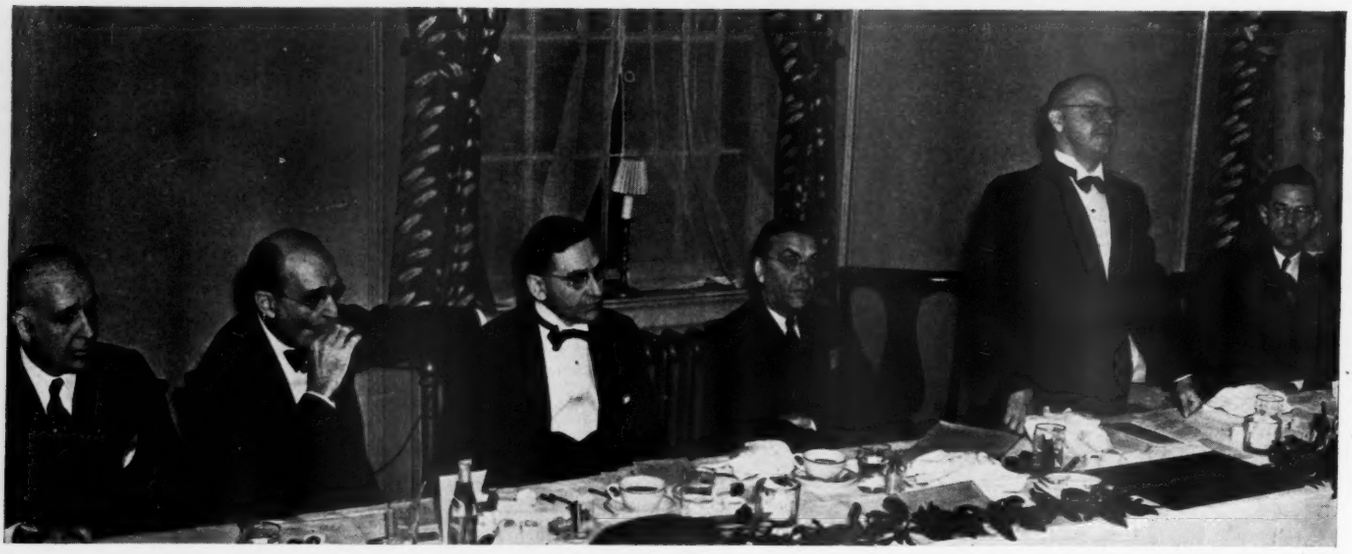
Today the entire business of transportation is headed for a reorganization. Transportation is one of many fields which will always exist. But no accredited residential college in the country specializes in transportation as a profession.

A few schools of aviation laid on the foundations of some defunct art colleges would survive very nicely. The recent government inquiry into the causes of airplane accidents has revealed several chief contributors. One is fatigue caused by nervous tension in trying to maneouvre a ship while watching the enormous instrument boards. This simple fact points to the need for larger crews. More trained men will be needed in the future. Who will train them?

Aviation and transportation are but two opportunities for small college specialities. There are as many more as their are human pursuits, but the one-type college persists in the main today.

(From the Columbia University Alumni News)

Colonel Greene Honored at Albany County Chapter and Zone 5 Meeting of New York State Society



Left to right: Engr. Alfred E. Roche, Colonel Frederick Stuart Greene, Engr. Elmer C. Lawton, Dr. Harlan H. Horner, Engr. Gardner C. George, Engr. Edward J. Kilcawley.

Albany County Chapter and Zone 5 meeting of the New York State Society of Professional Engineers Held at the University Club, Albany, New York

At a joint meeting held recently by the Rensselaer, Schenectady and Albany County Chapters and by members of the Society from Washington and Saratoga Counties, Colonel Frederick Stuart Greene, State Superintendent of Public Works, was showered with honors.

As a testimony of Colonel Greene's ability as an engineer and to his manifestation of continued interest in the advancement of the engineering profession, he was presented with an honorary membership in the Albany County Chapter of the New York State Society of Professional Engineers and with an etching by David C. Lithgow, internationally famous artist and etcher, of the State Office Building at Albany, which is one of the many major structures designed and built under the direction of Colonel Greene.

Other guests and guest speakers at this meeting included Engr. Alfred E. Roche, President of the New York State Society of Professional Engineers; Engr. Elmer C. Lawton, Deputy Commissioner of Highways in charge of construction of the State of New York and Director of Zone 5 of the New York State Society of Professional Engineers; Dr. Harlan H. Horner, Assistant Commissioner for Higher Education of the State of New York; President Edward J. Kilcawley of Rensselaer County Chapter; President Morris M. Cohn of the Schenectady County Chapter; Thomas F. Farrell Chief Engineer of the Department of Public Works of the State of New York; and Engr. Roy G. Finch, Secretary of the Examining Board of the State of New York.

Some of Colonel Greene's forthright laudatory remarks about engineers and the profession are as follows:

"The engineering profession has done more for the welfare of the human race than all other professions combined. When engineers were building the old Roman roads, which are still used today, doctors were boiling snakes and lizards and cramming them down the patient's throat. Engineering has done more to prevent disease and promote good health than all of the doctors. They developed good water supplies and sewage disposal systems."

Dr. Harlan H. Horner, assistant commissioner of higher education, spoke on requirements for a satisfactory course in engineering.

Pres. Roche stated, "As a society we engineers are concerned with scientific advancement and healthful condition of commerce, industry and manufacturing. We are an agency between capital on one hand and labor on the other. The inventive genius of the engineer has developed a social environment in which changes of the last generation have been more marked than those of any other. We should remember, however, that this progress could not have been achieved without the ability to secure capital for legalized enterprizes and to absorb expansion of our machine age."

Engineer Officers

Replies to letter to Governor GEORGE H. EARLE of Pennsylvania, published on page 7 of the April issue, American Engineer

Dear Editor:

Since you published in the April issue of THE AMERICAN ENGINEER the letter which I addressed to Governor Earle and others, I think it only fair that you publish their replies. I am enclosing these letters.

Sincerely,
Samuel I. Sacks.

HEADQUARTERS, THIRD CORPS AREA, UNITED STATES ARMY
Baltimore, Md.

Mr. Samuel I. Sacks
Pennsylvania Society of Professional Engineers
Philadelphia, Pa.

Dear Sir:

Receipt is acknowledged of your letter of March 29, 1938, to the Commanding General.

I have been directed to advise you that the selection and promotion of National Guard Officers is regulated by State authorities. The War Department prescribes certain requirements which must be met in order that these officers may be federally recognized. All of the officers now assigned to the 103rd Engineers who are federally recognized have met the War Department requirements for appointment, and if promoted, have also met the requirements for promotion.

It is suggested that this matter may very properly be presented to the Adjutant General of Pennsylvania by your Society.

Very sincerely yours,
L. S. Ostrander,
Major A. G. D.
Assistant Adjutant General.

HEADQUARTERS 28th DIVISION
Pennsylvania National Guard
Harrisburg, Pennsylvania

Office of the Commanding General

Mr. Samuel I. Sacks,
Pennsylvania Society of Professional Engineers
Philadelphia, Pennsylvania.

Dear Sir:

I wish to acknowledge receipt of your letter of the 29th ult. in which you state that the War Department regulations regarding the commissioning of officers in the 103rd Engineers should not be violated in which I concur.

I regret I cannot concur in your statement that "not a single officer of the 103rd Engineers is an engineer even approximately meeting these requirements".

I desire to inform you that in not a single case of over 900 officers commissioned actively in the Pennsylvania National Guard has there ever been a known violation of regulations, and all officers who are candidates for commission or promotion are required to present themselves and their qualifications before an Examining Board as provided by the regulations before receiving a commission in the Pennsylvania National Guard. These Examining Boards are appointed by the Commanding General of the Corps, who creates them of National Guard and Regular Army Officers jointly.

At the time the Engineer Regiment was created from an Infantry Regiment with a full complement of officers, eminent engineers in the City of Philadelphia, who were members of the Engineers Club and had recently been discharged from War Service, were consulted with a view to securing their recommendations of qualified professional engineers for commissions in this Regiment. These gentlemen, after going into the matter and learning that a continuity of residence in Philadelphia was necessary in order that a continuity in command and training could be secured, were unable to recommend a professional engineer with military training who could be counted on tc remain in Philadelphia over a period of years.

It is the policy of the authorities of the Pennsylvania National Guard, and it is believed to be a wise policy, that candidates for commission shall enlist in the organization of the Pennsylvania National Guard in the branch of the service in which they seek a commission. Thus, they receive the requisite military training to fit them to become officers.

I will deem it a favor if you will inform the members of your Society that enlistments in the 103rd Engineers are open, and that any engineer desiring a commission in the Pennsylvania National Guard will be welcomed, provided he can pass the physical examination and is within the legal age limits.

Thanking you for your interest in this matter, I beg to remain

Very truly yours,
E. C. Shannon,
Major-General.

WAR DEPARTMENT
Office of the Chief of the National Guard Bureau
Washington

Mr. Samuel I. Sacks
Pennsylvania Society of Professional Engineers
Philadelphia, Pennsylvania.

My Dear Mr. Sacks:

Your letter of March 26th, addressed to The Adjutant General of the Army, has been referred to the National Guard Bureau as a matter pertaining to the functions of the Bureau.

We have given your letter very careful consideration and are deeply appreciative of the interest shown by your organization in maintaining a high professional standard among the officers in the Engineering regiment of your city. We have very carefully examined the records of the field officers now serving with the 103rd Engineers, and these records in their official files reveal that they have conformed with the regulations pertaining to professional qualifications for their grades.

Your letter seems to have more to do with some proposed changes which are contemplated in the commissioned personnel of the regiment, and you can be assured that the National Guard Bureau will maintain its policy of the past in seeing that the regulations are complied with before federal recognition is extended to such officers.

You probably are aware that the tendering of appointments to officers in the National Guard is a function of the state authorities. Officers so appointed by the state are ordered before a board appointed by the corps area commander, and this board examines into the qualifications (Physical, moral, general, and professional, which consists of military knowledge qualifications and ability qualifications). Requirements for civil vocational experience qualifications are also considered, and in some cases of course, these are permitted by the regulations to be waived upon the request of the state authorities. Therefore, it would seem that the matter of obtaining properly qualified officers becomes a local function, and any assistance which can be given by your organization toward obtaining the very highest type of professionally qualified men for these places naturally would be appreciated by the National Guard Bureau.

Again thanking you for your interest.

Very truly yours,
Albert H. Blanding,
Major General,
Chief, National Guard Bureau.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF MILITARY AFFAIRS

Mr. Samuel I. Sacks, Chairman,
Pennsylvania Society of Professional Engineers
Legislative Committee

Dear Sir:

Governor Earle has sent your letter of March 29th requesting me to make reply for him.

Officers of the Pennsylvania National Guard are recommended for appointment or promotion by the organization commander and the recommendation is sent to the Commanding General, 28th Division, through channels. The Division Commander makes such investigation as seems proper to him, refers the application to an examining board appointed by the Commanding General, Third Corps Area, and then makes his recommendation to the Governor, through the Adjutant General, based upon the information before him at that time.

The question of professional qualification raised in your letter is one to be determined by the examining board appointed by the Commanding General of the Third Corps Area. We believe that the Regulations are followed, although we have knowledge of several cases in which the professional requirements have been waived by the Chief of the National Guard Bureau, as well as by the Commanding General or the Third Corps Area.

A copy of your letter with a copy of this reply will be sent to the Commanding Officer, 103rd Engineers, to the Commanding General, 28th Division, and to the President of the Examining Board for their consideration. We believe that the Regulations have been complied with or that departures therefrom have been made only upon the approval of the Federal Government representatives.

Yours very truly,
Frederick B. Kerr,
Adjutant General.

OPPORTUNITIES FOR GRADUATES OF ENGINEERING COLLEGES

(Continued from page 10)

increase in the number of men trained to enter the profession, and this brought about changes in the proportions of those who were unemployed or engaged in non-engineering work. The opportunities for engineering employment differed markedly among the professional classes. For example, over the 5-year period 1929-1934 for the profession as a whole private engineering employment declined 8.2 percent but it increased more than a third for chemical and ceramic engineers. There was little increase or decrease for electrical, mining and metallurgical, and mechanical and industrial engineers. In the case of the civil engineers there was a decrease of about one-third in private engineering employment. It must be remembered, however, that industry of the present and future demands a large number of engineers for operation and management and only a small number for highly specialized engineering and research. This is borne out by the statement of Mr. Cobleigh, Dean of Engineering of Montana State College in his letter to me of March 3, 1938. He says—

"Personnel officers of several large industrial concerns visit the institution (Montana State College) each year. These officials conduct personal interviews with members of the graduating class and select the more promising students for training courses in industry. The employment situation in recent years has improved because comparatively small industrial concerns are now employing young engineering graduates for positions that were previously filled by men without technical training. As an example, a local sugar factory employed an electrical and also a mechanical engineering graduate, whereas in previous years they have employed electricians and mechanics."

The engineer of tomorrow, however, quoting Mr. W. E. Wickenden, Director of Investigation for the Society for the Promotion of Engineering-Education, "will not rise to leadership by abandoning his distinctive role, or by permitting it to become ill-defined. He will do so by remaining essentially an engineer by becoming a more competent engineer, by extending the reach of engineering methods and ideals to larger realms of life, and withall by making himself a team-mate eagerly desired by other types of men. If engineering education is to serve these ends it must safeguard all the distinctive qualities and virtues of its past and add to them a more necessary humanism."

For a few moments let us consider some of those traits of character and mannerism that are often referred to as personality or cultural subjects. One Dean who has been placing engineering students at work for over a quarter of a century says, "It is only the men whom for one reason or another we cannot recommend who are forced to find jobs for themselves. Their personality might not be satisfactory, or they might drink, or they might be dishonest."

Another college furnishes employees with a personality rating of candidates for positions. These ratings are prepared through a committee composed of the heads of all departments, and cover the following major qualities: (1) Initiative with reference to constructive thinking and resourcefulness; ability and intelligence to act; (2) performance, with reference to performance of work in an energetic manner; (3) personality, whether pleasing, displeasing, or repellant; (4) cooperation, with reference to the faculty of working harmoniously with others toward the accomplishment of common duties; (5) loyalty, with respect to employer, or selfish and mercenary, or hypercritical and faultfinding; (6) quality of work with reference to thoroughness and reliability; and (7) judgment, with reference to ability to differentiate between important and unimportant matters.

These major qualities are subdivided into degrees and graded A, B, C, etc., and finally there is a place provided for (8), moral character and personal reputation, and provision for endorsement or non-endorsement by the faculty member making the rating. The students are early advised of the personality traits that are considered important for their success in industry and are encouraged to develop them. The seniors of this institution attend lectures on the methods of finding employment in industry and on the methods of conducting interviews with the personnel officers of industry. This seems to be a very worth while practice.

It is still a popular fallacy that an engineer is a fellow who wears high-topped boots and carries a three-legged telescope around with him, peeking through it occasionally and waving his arms. Technically these men are now classified as surveyors, and while it is essential that an engineer know the fundamentals of surveying, such work is vastly different from being able to apply the principles of engineering economics to a commercial or industrial enterprise and set forth in a well organized and logical report a clear statement of the facts, with advice as to soundness, economics, probable life, and fair value of the undertaking. You may expect to find surveying jobs scarce, but the properly qualified engineer will find much to do in the fields of economics, operation, and management of industry.

Receives Honorary Degree of Doctor of Chemistry

J. Earl Frazier

Engineer J. Earl Frazier, Vice-President of Frazier-Simplex, Inc., Washington, Pennsylvania, firm specializing in engineering in the glass industry, and a member of the Pittsburgh Chapter, Pennsylvania Society of Professional Engineers has just received announcement that the honorary degree of Doctor of Chemistry has been conferred upon him by the Academia de Sciencias e Artes of Rio de Janeiro, Brazil.

NEWS OF STATE SOCIETIES

Editor's Note: THE AMERICAN ENGINEER will carry reports of State and Chapter meetings in the issue succeeding their receipt. We must have copy by the 20th of the month preceding the month of issue. Copy received after that date runs the risk of not being on time. It would help if meetings were held earlier in the month.

DISTRICT OF COLUMBIA

Pres.—VIRGIL C. WAGNER *Secty.*—WM. L. BACH

The District of Columbia Society of Professional Engineers met recently at 2400 Sixteenth St., N. W., Washington, D. C., President Wagner presiding.

Copies of the Department of Labor Report, "Income and Earnings in the Engineering Profession, 1929 to 1934" were distributed to those present before the meeting was called to order.

The members and guests were treated to the first showing in Washington of the new sound motion picture, "Approved by the Underwriters" through the courtesy of the Underwriters' Laboratories of Chicago who were represented by Hugh M. Robinson. The film was made in the laboratories and depicts in comprehensive fashion the various tests in use to determine whether the products and appliances submitted for approval meet the standards of safety established by the Underwriters.

Announcement was made of the admission to membership since the last meeting of Engineers Paul Karl Gerhardt and Gordon Edward Holland.

Engineer Leo H. Cleary, chairman of the Legislative Committee, reported that S.3717, A bill to regulate the practice of professional engineering and creating a board for licensure of professional engineers in and for the District of Columbia, had been introduced by Senator King and had been referred to the Senate Committee for the District of Columbia. He reported further that it was the intention of his committee to bring the bill to the attention of each of the State Societies of Professional Engineers and the Legislative Committee of N. S. P. E.

John W. Dunham,
Chairman, Publicity Committee.

INDIANA

President—SULTAN G. COHEN
Secretary—J. V. SMYTHE

I. S. P. E. NEWS LETTER

Issued by the Indiana Society of Professional Engineers, Inc.
Editor—E. W. WATKINS
Operations Mgr.—W. A. MILLER
Circulation Mgr.—G. L. KNOLL

ANTHONY WAYNE CHAPTER PERFECTS ORGANIZATION

The newly-organized Anthony Wayne Chapter of the Indiana Society of Professional Engineers perfected its permanent organization at a meeting at the Ft. Wayne Chamber of Commerce, April 6th and elected as its president, Clyde A. Walb, president of the American Steel Dredge and the General Dredging Companies. Other officers include: Harry K. Gottschalk, Allen County Surveyor, Vice-President; Chauncey R. McAnlis, Ft. Wayne, City Engineer, Treasurer, and Fred B. Mendenhall, Office Engineer, State Highway Department, secretary.

Members of the board of directors, other than officers, were elected: George Niehous, dean of civil engineering department. Tri-State College, Angola; George Bush, International Harvester Company; Roy Biberstine, district engineer, State Highway Department; Asher W. Gray, Wabash County Engineer; Walter Barr, Western Gas Construction Company and Harry G. Bollinger, Tri-Lake Construction Company, Columbia City, Ind.

Pres. Walb appointed a constitution and by-laws committee comprised of W. Carlisle Duell, Ass't. City Engineer; John L. Hayner, Bass Foundry & Machine Company; William R. Shea, State Highway Department, and Mr. Mendenhall. The committee will draft a constitution and by-laws for the chapter.

CHANGE PROPOSED FOR SELECTION OF DIRECTORS

A constitutional amendment proposing to change the representation on the Board of Directors and carrying the signatures of more than ten percent of the membership of the Society was read by Secretary Smythe at the March Meeting. The amendment would provide for one director from each of the local chapters and six others representing, as far as practicable, the membership in all sections of the state which are not organized under local chapters. The intent of the amendment is to guarantee each local chapter and each geographical section of the state a voice on the Executive Board.

The amendment was discussed, at length, and it was decided to submit it to the membership for vote along with the ballot for the officers for the coming year.

NOMINATING COMMITTEE REPORTS

At the March meeting of the Society Chairman W. W. Hadley, of the nominating committee, presented the committee's slate of officers of the Society for the coming year. The election will be by a letter ballot with the returns announced at the regular meeting in May.

The following nominees were submitted by the committee: President, S. G. Cohen; 1st Vice-President, M. G. Johnson; 2d Vice-President, Frank Schutt; Secretary, J. V. Smythe; Treasurer, Earl Carter; National Director, Don. H. Walker; Directors, D. L. Warren and K. E. Lancet.

Additional nominations were invited from the floor and two additional candidates for Director were submitted, James E. Sheldon and Louis E. Geupel.

BUILDING CODE COMMITTEE ACTIVE

Chairman B. B. Straight and L. T. Gootee, of the Society's Building Code Committee attended a meeting March 22d in Indianapolis called by the Indiana Society of Architects to discuss the method of securing revision in the present State Building Code. Representatives from member associations of the Society of Architects, construction leagues, and building trades were also in attendance.

W. C. McGuire, chairman of the Architects Committee summarized the previous efforts to revise the code and outlined the proposed method in securing revision. A request is to be made for W.P.A. Funds to finance the work. Codes from various cities and states are to be studied and data compiled for the new code proposed for Indiana.

ON PUBLIC SERVANTS

With primary time at hand and attention focused on the aspirants to positions on the party tickets for elective offices of the cities and counties of the state, it might be appropriate to give some thought to the men who serve by virtue of appointment to office, the members of boards or councils subservient to elected officials. The success or failure of an administration can generally be traced to the appointive personnel, in whose ability, honesty and integrity the elected official stakes his bid for meritorious public achievement.

The physical plant of the larger cities of today represent a large investment of the public funds, involving public service enterprises such as the construction and maintenance of the streets, sewers, sewage disposal plants, and in some instances, the water, gas and electric utilities of the city. The life and safety of the individual are largely determined by the structures and operating mechanisms that constitute our public works. To the men and organizations who direct the development of our public works is entrusted this responsibility of safeguarding the individual in his daily routine.

Appointments to boards or councils that control our public works should be made with a realization of the heavy responsibility that is to be reposed in these men. Political activity, alone, does not qualify a man for such a position. An intimate knowledge of the public works of the city, the needs of the city in the way of new works enterprises and engineering judgment and planning are required. A place should be found on such bodies for the professional engineer, whose education and training have fitted him for such a service.

The professional engineer is aware of his duties and responsibilities as a public servant, and is carrying on in such positions with resultant credit to his profession.

FROM THE SECRETARY

The bookkeeping burdens of both the Secretary and Treasurer will be greatly lessened if the following procedure is observed in the payment of dues, etc.:

1. Make checks or money orders payable to "Indiana Society of Professional Engineers, Treasurer."
2. Give or mail dues to J. V. Smythe, Secretary, State House Annex, Indianapolis.
3. Promptly notify Secretary of changes in mailing address.

4. Notify Secretary if you are not receiving your copy of the AMERICAN ENGINEER.

APRIL MEETING

The regular meeting of the Indiana Society of Professional Engineers was held April 21st in the World War Memorial Building in the city of Indianapolis, 7:30 P. M.

MISSOURI

Pres.—E. W. CARLTON *Secty.*—W. H. McDILL

PROPOSED CODE OF ETHICS APPROVED BY EXEC. BOARD

Report of Committee to Be Voted on By Membership of Society

The Committee on Ethics and Practice, under the chairmanship of Col. F. W. Green, has submitted a report to the Executive Board, and the proposed Code of Ethics has been approved for vote of the membership. This proposed code is herewith presented in full. A ballot will be attached to each copy of *The Missouri Engineer* and every member is expected to vote on this matter.

Proposed Code of Ethics

Preamble

Codes have done much to crystallize professional sentiment and have been effective in winning for the group concerned better respect on the part of the public. Declarations of principles are wholesome. They set standards which influence individuals in their conduct. They announce to the world ideals by which men may be judged. Some guiding principles are:

1. We respect our obligations and neither expressly or impliedly do we promise a performance which we cannot reasonably expect to fulfill.
2. We avoid misrepresentation and recognize that permanent business relations can be maintained only on a structure of honesty and fair dealing.
3. We shall strive to be courteous and considerate to those with whom we deal, to be prompt and businesslike in our appointments, and to carry on negotiations with all reasonable expedition.
4. We shall avoid statements tending to injure or discredit a legitimate competitor, and shall divulge no information acquired in confidence with the intent of giving or receiving an unfair advantage.
5. We shall strive for simplification and standardization within the bounds of utility and economy and shall further those developments which will improve society.
6. We shall recognize that character is the greatest asset and discourage acts where character is not recognized as the foundation of good engineering.
7. We shall undertake to avoid disputes but when they are met we shall settle them on the basis of facts and fairness.
8. We shall neither give nor receive bribes in the form of gifts, entertainment, or money, and shall expose commercial bribery wherever encountered.

Submitted by Committee on Ethics and Practice.
F. W. Green, Chairman.

ACADEMY OF SCIENCE MEETS AT SCHOOL OF MINES

Engineering Section Hears Distinguished Practitioners Speak on Many New Developments

April 21 to 23 was set aside at the Missouri School of Mines, Rolla, for the fourth annual meeting of the Missouri Academy of Science. The engineering section, under the chairmanship of E. W. Carlton, heard addresses by prominent engineers who spoke on the new developments in the various phases of the profession.

Among those scheduled to speak were Col. C. L. Sturdevent, Division Engineer, Corps of Engineers, Missouri River Division, Kansas City; L. A. Hawkins, Executive Engineer. Research Laboratory, General Electric Company, Schenectady, New York; Chas. A. Freeman, Ceramic Engineer A. P. Green Fire Brick Co., Mexico, Missouri; and D. H. Killefer, Contributing Editor, Industrial and Engineering Chemistry, New York, N. Y.

An Engineers' Day was planned by the students of the School of Mines and open house was kept for the visitors.

COLE COUNTY ENGINEERS HOLD SUCCESSFUL MEETING

Alumni of University and From School of Mines Fraternize at Annual Dinner

Alumni of the College of Engineering, Columbia, and the School of Mines, Rolla, met together recently to do honor to the patron Saint Patrick and to join in the annual social affair of Cole county engineers. Seventy-five were present.

R. P. Cummins was toastmaster for the evening and introduced the many visitors from Columbia and from Rolla. Dean F. Ellis Johnson, of Columbia, spoke briefly. Prof. W. R. Chedsey, Rolla, was the speaker of the evening on the subject "Engineering and Safety."

Judge Hyde, of the Missouri Supreme Court, presented an award for meritorious service as an alumnus of the University to Carl W. Brown, Chief Engineer, Missouri State Highway Department.

Four reels of sound movies were presented under the auspices of the Missouri Power & Light Co.

CONVENTION COMMITTEE TO BE LED BY VICTOR H. LYON

Summer Meeting Plans Are Being Laid by Chairman Recently Appointed

Victor H. Lyon, Jefferson City, was named by President E. W. Carlton to lead the work in arranging affairs for the second annual convention of the Society to be held this summer. Definite dates and plans have not been made yet and Lyon will first have to form his committee.

NEW MEMBERS

R. O. Jackson, Rolla; David F. Walsh, Rolla; Robt. W. Hodson, Kirkwood; Jas. R. Cunerty, St. Joseph; Chas. A. Geddes, Jr., St. Joseph; M. M. Prussing, Camdenton; D. H. Crego, Kansas City; King M. Hill, St. Joseph; James R. Knox, Farmington; Alvin G. Hart, St. Joseph; Wm. J. Hedley, University City; Norvin F. Tamm, Macon; B. P. Weintz, Brookfield; E. Q. Mell, Macon; C. H. McAtee, Fulton; Robert Jones, St. Joseph; J. W. Gerdts, New London; J. W. Rethmeyer, New London; Sumter Lea, III, New London, and W. H. McGee, Memphis.

NEWS OF ENGINEERS

E. J. Treanor, who recently joined the Society, has been transferred to a new position in Wichita, Kan. We regret the fact that Engineer Treanor was taken out of the state, but we congratulate him on promotion.

Oren J. Lamb, Macon, has been doing great work in his territory. Applications have been coming in quite frequently from him.

F. J. Shields, St. Joseph, asked for a lot of applications in February and he has sent most of them back with each one counting for a new and valuable member.

C. W. Brown, Jefferson City, Chief of M. S. H. D., was awarded a scroll in recognition of his constructive work as an alumnus of the University of Missouri. The ward is one of three made each year by the Alumni Association. It was presented at the annual banquet of the Cole County Engineers' Alumni Association.

W. Scott Johnson, who was reported in the February issue as recovering from an emergency appendectomy, has returned to his desk and is putting the boys to work.

O. D. Chrisman, is now acting as Division Engineer for the Highway Department at Springfield.

L. A. Pettus, St. Louis, and M. S. Murray, Jefferson City, are members of the Executive Committee of the Citizens Road Association and met with that group at a public hearing held in Jefferson City recently.

NEW JERSEY

Pres.—JAY A. JACOBS *Secty.*—ERNEST F. WEEKS

THE HUDSON ENGINEER

Published Monthly by the Publicity Committee of the Professional Engineers Club of Hudson County, N. J.

April Meeting, Monday evening, April 25, 1938, 8:00 P. M. at Public Service Auditorium, Journal Square, Jersey City.

Guest Speaker: Lieutenant Joseph Jones, Finger Print Expert, Bureau of Identification, Jersey City Police Department.

THE MAN OF THE MONTH

In accordance with the customary policy of each month honoring one of the members of the Professional Engineers' Club of Hudson County, The *Hudson Engineer* pays tribute to Engineer James A. Foley, a native son of Hudson County and Jersey City.

After the Grammar and High School education, he entered Stevens Institute of Technology, a Hudson County seat of learning, from which he was graduated with the degree of Mechanical Engineer.

After graduation he had a variety of experience with the Standard Oil Company on still and boiler design; with the Lehigh Valley Railroad on bridge design and track layout and with the Celluloid Company on investigative and experimental work on solvent recovery systems. This latter work was followed up with the actual design of solvent recovery equipment from the experimental data. Following this work Engineer Foley designed automatic switching equipment for the Bell Laboratories.

He then joined the personnel of the Holland Tunnel on the Resident Engineer's staff on design and field work during the initial stages of the tunnel construction. He left the Holland Tunnel, to accept a position as Bridge Engineer with the Hudson County Engineering Department. This work embraces a wide range, not only on bridge design but including all electrical and mechanical engineering work for the county.

The electrical work covers all of the installations at the County institutions, together with traffic signal installation. The mechanical work covers the design and installations of eight power plants with all supplementary equipment for the various county institutions.

Supplementing this work he is an instructor in Mechanical Drawing and machine design in the Evening Technical and Industrial High School, which, by the way, makes him late for most of the monthly meetings.

He is a member of the American Society of Mechanical Engineers. As a charter member of the Professional Engineers' Club of Hudson County he has an abiding faith in the sincerity of purpose of the members and the continued growth and success of the Club. He is Club Treasurer and wishes to state that all contributions (DUES TO YOU) are gratefully received and acknowledged.

"THE HUDSON ENGINEER" STAFF

RAYMOND F. LEUTHY, *Editor*, 12½ Nesbitt Street, Jersey City.
FRANK C. SCHLINDWEIN, *Adv. Mgr.*, 96 Grace St Jersey City
TEOFILLO REANTILLO, *Circulation Mgr*, 19 Bryan Place, Jersey City
CHARLES H. SPENCE, *Contr. Ed.*, 43 Laurel Ave., Arlington, N. J.

STANDING COMMITTEES

For ready reference *Hudson Engineer* publishes the following list of standing committee members:

Chapter Representatives—Engineers Hugh C. Clarke, Peter F. Daly, Nicholas J. McGuiness.

Legislative—Herbert Hartman, Chairman; N. J. McGuiness, Cecil Lurie, William S. Logan, Jr.

Ethics and Professional Practice—William G. Christy, Chairman; Abraham Walton, Arthur F. Gulbrandsen.

Employment—Hugh C. Clarke, Chairman; Hugh A. Kelly, Joseph O'Leary.

Public Affairs—Otto A. Knipping, Chairman; George Yoemans, Frank Radigan, James Heffernan, Edward Walker.

Engineering Education—James A. Foley, Chairman; Arnold Weisselberg, William F. Caldwell, Achilles Angelicola.

Program—C. George Kreuger, Chairman.

Entertainment and Reception—Richard L. Higgins, Chairman; Harold Anderson, James B. Collins, Charles Scheidecker.

By-Laws and Fees—Alvin Ruefer, Chairman; Peter F. Daly, James A. Manalio, John P. Curley, Clinton M. Froehlich, Samuel Aronson.

Membership—Norman B. Newcombe, Chairman; Louis Griesinger, John Denno, Edward Saphore, Otto Scholl, John L. Hodges.

Publicity—Raymond F. Leuthy, Chairman; Teofillo Reantillo, Frank C. Schlindwein, Peter McNamara, Charles H. Spence.

Most of the standing committees, according to reports made, have already held meetings and are active. The committee on Legislation has been actively engaged in securing support for the new registration bills now in the Legislature.

The Ethics and Professional Practice Committee has been investigating the unethical practice of several business concerns in the county who advertise themselves as engineers, and is preparing to report.

The Committee on employment has placed several engineers in private positions since the last meeting.

The Public Affairs Committee has submitted a resolution on Highway Safety. This resolution read at the last meeting is now before the State Association.

The committee on entertainment and reception has held several meetings and await only the approval of the Executive Board to further arrangements for the annual June Dinner, tentatively set for the early part of June at the Essex House.

The Committee on Membership has investigated and submitted, since its inauguration, the names of ten engineers who have been elected to membership in the Club in the various grades. A personal canvass membership drive is now being planned and will be under way shortly.

All of the above reports point toward accomplishment, and a greater Professional Engineers' Club. If you are inactive "Get on the Band-wagon." Help raise the standards of your profession and you too, will be able to say, "I did my part."

MEETING OF THE BOARD OF TRUSTEES AND CHAPTER PRESIDENTS OF THE NEW JERSEY ASSOCIATION OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS, HELD AT THE HOTEL ROBERT TREAT, NEWARK, N. J.

Those present included Engrs. Kauffman, Mueller, Buchanan, Goodkind, Parsons, Wise, Kissam, Trimpi, Williams, McInnis, Clark, Runyan, Conklin, Brown, Randolph, Loede, McKee, President Jacobs, Hamilton, and Weeks.

Following Committee reports were given:

Ethics, Prosecution, Budget, Architects-Engineers, Membership, no report.

Legislative Committee—Russell S. Wise, Chairman

Assembly Bills No. 507 and No. 508 covering the new revised Engineers Law have been introduced in the assembly by Assemblyman Roscoe McClave and have been assigned to the Highway Committee.

Unions Activities—Hugh Clarke, Chairman

Engr. Clarke reported that the case of U. S. Testing Co. in Hoboken, the employees of which joined the F.A.E.S.&T. was investigated, but no professional engineers were found to be in their employ: All engineers should study the *Little Wagner Act* being introduced in the legislature, and it is recommended that an amendment be added to it, exempting professional engineers from the provisions of the act.

Director N.S.P.E.—Engr. Geo. F. Randolph

The N.S.P.E. offers its co-operation to all other engineering societies in promoting the engineer at the Worlds Fair.

The next N.S.P.E. Convention will be held in Pittsburgh, Pa., in October.

The question was brought up if it were permissable to use the N.S.P.E. emblem on private stationery. It was voted that the use of this emblem was not unethical, but suggested that the use of the letters N.S.P.E. is more good form.

Publicity Committee—H. W. Parsons Chairman

Engr. Parsons went into detail, outlining the expenses involved to publish a monthly or by-monthly Association pamphlet and include all licensed engineers. He asked for the sum of $100.00 in order to proceed with a trial issue, which would circularize the entire licensees. His request for $100.00 was granted.

Engr. Russel Wise as Chairman for the Legislative Committee was appointed Whip Leader to follow through Bills No. 507 and No. 508 in the Assembly and Senate.

All Chapters at this point were urged to present resolutions, favoring these bills, and urging their respective Assemblymen and Senators to vote for their passage.

A motion was passed instructing the President of each Chapter to see that each Assemblyman and Senator in his jurisdiction, were personally contacted about these bills, and their reaction reported to Russel Wise, on or before April 16th.

The names and addresses of the Chairmen of the Legislative Committee is to be sent to Russel Wise immediately, so he may have them to facilitate his program when necessary.

Passiac, Monmouth Union, Hudson, Essex, Bergen South Jersey and West Jersey Chapter, all reported that their legislatures were favorably inclined toward the bill.

Letters were read from each of the Chapters covering these recommendations to be made to the Governor for appointment to the State Board.

	1st Choice	2d Choice
South Jersey	Goodkind	
Union	Goodkind	Prof. A. Johnson
Passiac	Goodkind	Russel Wise
Hudson	Kelly	Goodkind
Morris	Goodkind	
Bergen	Goodkind	Arthur Novak
Middlesex	Goodkind	
West Jersey	Goodkind	Paul Rice
Essex	Goodkind	

Upon motion made and passed, the Secretary was instructed to submit the names, with qualifications of Morris Goodkind, James Kelly and Russell S. Wise to the Governor, from which he is requested to select his appointee.

Ernest F. Weeks, Secretary-Treasurer.

NEW YORK

Pres.—ALFRED E. ROCHE *Secty.*—W. A. STUBBS

KINGS COUNTY CHAPTER

New York State Society of Professional Engineers, Inc.

Meets Third Thursday of Each Month Except July, August and September at BROOKLYN ENGINEERS' CLUB, 117 REMSEN STREET BROOKLYN, N. Y.

ANNUAL MEETING—ELECTION OF OFFICERS

The Annual Meeting of Kings County Chapter was held at the Brooklyn Engineers' Club, 117 Remsen Street, Brooklyn, April 21.

The annual reports of the officers, committees and the executive board were made, and the election of officers, directors and advisory councillors for the ensuing year was held.

The official ballot, giving the nominations for officers and directors as presented by the Nominating Committee, consisting of Patrick F. Foley, Chairman, William Spivak, George A. Hartung, Charles W. Burke, and Carl R. Flodin, Jr., is shown below.

In addition to the officers there are twelve directors, six of whom are elected yearly for a term of two years. The six directors whose terms did not expire are: John J. Donegan, James F. Fouhy, Gustave Freeman, Joseph C. O'Dea, Clifford W. Valentine and Fred Wackenhut. The six directors whose terms expired, are: George A. Dorfman, Benjamin Joachim, Irving J. Lake, Louis G. Nieman, Charles N. Pinco and Louis A. Walsh.

By a unanimous vote of the Executive Board, the members of the Advisory Council were renominated.

The following officers, directors and advisory councillors were elected at the Annual Meeting of the Kings County Chapter April 21.

Officers: President, James F. Fairman, 4 Irving Pl., N. Y.; Vice-President, Louis A. Walsh, 896 Lincoln Pl., Bklyn; Secretary, George A. Dorfman, 229 Vernon Ave., Bklyn; Treasurer, Otto Claussner, 1004 Municipal Bldg.

Directors: John J. Donegan, 4018 Bedford Ave., Brooklyn; Joseph Fertik, 28 Colin Place, Brooklyn; James F. Fouhy, 1018 47th Street, Brooklyn; Gustave V. Freeman, 2000 84th Street, Brooklyn; Benjamin Joachim, 261 Norman Ave., Brooklyn; Irving J. Lake, 7119 Shore Road, Brooklyn; Louis G. Nieman, 1052 East 38th St., Brooklyn; Joseph C. O'Dea, 210 Albemarle Road, Brooklyn; Frank H. Sewall, 77 Linden Boulevard, Brooklyn; Clifford W. Valentine, 192 Bay 23rd St., Brooklyn; Frederick Van Olinda, 34 Tarence St., Rockville Centre; Fred Wackenhut, 10762 109th St., Richmond Hill, N. Y.; Joseph A. Vertefeuille, 3514 Avenue D, Brooklyn, N. Y.

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Joseph A. Vertefeuille, Pres. George A. Dorfman, Secretary.

QUEENS COUNTY CHAPTER OF THE NEW YORK STATE SOCIETY OF PROFESSIONAL ENGINEERS, INC.

Roster of Members

The New York State Society of Professional Engineers was founded in 1926 and the Queens County Chapter organized as a unit in 1929. In 1934 the National Society of Professional Engineers was chartered and thereafter membership represented a three-fold affiliation in County, State and National organizations.

Officers: George H. Bruns, President; Martin Nelson, 1st Vice-President; Walter P. Warendorff, 2d Vice-President; Charles S. Stratton, Treasurer; Thomas J. Graham, Financial Secretary.

Directors: William H. Bertram, 1938 and 1939; Ignatius W. Conway, 1938 and 1939; John J. Delaney, 1938 and 1939; Richard A. Fiesel, 1937 and 1938; Harry D. Garretson, 1937 and 1938; Wm. C. Kochendoerffer, 1937 and 1938; Frank Lilien, 1938 and 1939; Edgar N. Smith, 1937 and 1938; William H. Walker, 1937 and 1938; Albert C. Whitehead, 1938 and 1939.

Executive Secretary: Edward J. Flanagan.

STANDING COMMITTEES 1938

Committee on Membership and Arrears: Martin Nelson, Chairman; William H. Bertram, John J. Delaney, George F. Carlin, Alban Mazeau.

Committee on Procedure: Frank Lilien, Chairman; Frank C. Jamin, Joseph H. Kline, Walter R. Donohue, James V. McGarry.

Committee on Retainers and Appointments: Walter P. Warendorff, Chairman; William H. Walker, Charles S. Stratton, J. Homer Sanford, Joseph Smith.

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Committee on Public Relations: Claxon N. Ely, Chairman; Justin C. McCarthy, George P. Winn, Walter P. Warendorff, Mathias Bernard.

Character Committee: J. Franklin Perrine, Chairman; Andrew K. Johnson, George P. Winn, William H. Walker, William C. Kochendoerffer.

**Roster of Active Members* 1938:

Alvy, Theodore D., 9618 72d Rd., Forest Hills.

Bernstrom, Edward A., 9344 214th St., Queens Village, Bertram, William H., 223-20 106th Ave., Queens Village, Bernard, Matthias, 104-19 130th St., Richmond Hill, Bruns, George H., 180-12 Hillside Ave., Jamaica, Brandshaft, Alter, 149-01 17th Rd., Whitestone, Brodsky, Frank, 4040 78th St., Jackson Heights, Burroughs, Charles T. Jr., 162-07 Laburnum Ave., Flushing.

Campbell, Nathan, 6066 Putnam Ave., Ridgewood, Carlin, George F., 189-36 44th Ave., Flushing, Carousso, Aristides F., 3826 206th St., Bayside, Cifuni, Andrew J., 3215 103d St., Corona, Clarke, Francis W., 8315 116th St., Kew Gardens, Clayton, Eugene F., 3637 Corporal Kennedy St., Bayside, Clifford, Ernest L., 1124 Ford Bldg., Detroit, Mich., Clos, Charles, 6434 83d St., Elmhurst, Conner, Benjamin F., Jr., 102-40 85th Dr., Richmond Hill, Conway, Ignatius W., 1076 E. 28th St., Brooklyn, Cook, Harry G., 9258 219th Queens Village, Cooke, Harold D., 116-18 222d St., St. Albans, Corra, Julius C., 3135 Crescent St., L. I. C., Cruise, Gerald V., 3461 91st St., Jackson Heights, Cunningham, Edward F., 2909 162d St., Flushing.

Dahm, George W., 4203 Ditmars Ave., L. I. C., DeBevoise, Andrew C., 122-19 153d St., Jamaica, Deehan, James F., 8608 117th St., Richmond Hill, Delaney, John J., 8310 35th Ave., Jackson Heights, Donohue, Walter R., 4120 157th St., Flushing, Drexel, Frederick, 6266 60th Dr., Maspeth, Duggan, William J., 2318 31st Ave., L. I. C.

Eaton, Thomas D., 9516 75th St., Ozone Park, Elliott, William S., 6467 83d Pl., Elmhurst, Ely, Claxton N., 104-24 202d St., Hollis, Engelhart, Julius C., 112-07 91st Ave., Richmond Hill, Erlandsen, Oscar, 175-19 Devonshire Rd., Jamaica.

Farley, Joseph C., 104-25 93d Ave., Richmond Hill, Fiesel, Richard A., 671-24 Clyde St., Forest Hills, Fink, Harold, 301 E. 21st St., N. Y. C., Fitts, Herry M., 7150 Austin St., Forest Hills, Flanagan, Edward J., 7126 Juno St., Forest Hills, Fox, Bernard F., 104-24 206th St., Hollis.

Gallant, Frank L., 9211 Springfield Blvd., Queens Village, Garretson, Harry D., 154-47 9th Ave., Whitestone, Glendinning, William, 164 Parkside Ave., Brooklyn, Graham, Thomas J., 8621 86th St., Woodhaven, Gunther, Oscar B., 4327 165th St., Flushing.

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Keegan, Francis P., 67-107 Clyde St., Forest Hills, King, Edward P., 107-21 Monterey St., Queens Village, Kline, Joseph H., 115-56 Powells Cove Blvd., College Point, Kochendoerffer, William C., 171 Brompton Rd., Garden City, Kovnat, Harry, 470 W. 24th St., N. Y. C., Kransdorf, Sol, 4755 187th St., Flushing.

Lawson, Walter E., 82-16 34th Ave., Jackson Heights, Lilien, Frank, 3910 47th St., L. I. C., Lippelt, Hans B., 9428 78th St., Ozone Park, Lowe, Arthur, 115-22 173d St., St. Albans.

McCarthy, Justin C., 4133 248th St., Little Neck, McGarry, Francis J., 5503 92nd St., Elmhurst, McGarry, James V., 9420 53d Ave., Elmhurst, McInenely, Charles W., 3509 149th St., Flushing, McLaughlin, Joseph, 142-30 Roosevelt Ave., Flushing, McLaughlin, William E., 9345 Vanderveer St., Queens Village, Manning, Ernest G., 109-03 223d St., Queens Village, Martin, Lloyd A., 9121 95th St., Woodhaven, Mazeau, Alban, 9934 211th St., Queens Village, Mellny, W. A., 4058 Case St., Elmhurst, Metz, George, 107 Garden St., Great Neck, Morton Robert J., 532 Beach 129th St., Belle Harbor, Moss, Edward, 385 Flatbush Ave., Ext., Brooklyn.

Nelson, Martin, 34-17 28th St., L. I. C., Newman, J. John, 8276 166th St., Jamaica, Nitsche, Vladimir C., 2416 27th St., L. I. C. Pennefather, J. Raymond, 68 Hunters Pt., Ave., L. I. C., Perrine, J. Franklin, 3135 Buell Pl., E. Elmhurst, Pflanz, Louis W., 6023 Ralph St., Ridgewood, Pisow, Bruno H., 5101 39th Ave., L. I. C., Poetz, Theodore F., 85-70 148th St., Jamaica.

Reith, Miss Marie, 120-05 157th St., Jamaica, Richards, Stephen C., 3533 83d St., Jackson Heights, Robinson, Thomas T., 106-05 109th Ave., Ozone Park, Ryan, Edward J., 3528 80th St., Jackson Heights.

Sanford, J. Homer, Jr., 500 5th Ave., N. Y. C., Scharfenberger, Louis M., 8741 81st Ave., Glendale, Schoonmaker, Leon M., 68 Hunterpoint Ave., L. I. C., Schuetz, Robert F., Natl. Broadcasting, 30 Rockefeller Plaza, N. Y. C. 29-01 159th St., Flushing, Scott, Benjamin A., 161-34 Grand Central Pkwy., Jamaica, Seward, William E., 8531 169th St., Jamaica, Shugrue, Michael J., 3315 87th St., Jackson Heights, Simon, Jacob, 130 Amherst St., Brooklyn, Smith, Joseph, 234 W. 48th St., N. Y. C., Steiner, Carl T., 8283 Homelawn Ave., Jamaica, Stern, Emery I., 4333 46th St., L. I. C., Stockwell, Norris P., 174 Pinehurst Ave., N. Y. C., Stratton, Charles S., 8921 118th St., Richmond Hill.

Taylor, Frank H., 3532 168th St., Flushing, Thompson, Missac, 116-15 217th St., St. Albans, Tormey, Joseph M., 9047 53d Ave., Elmhurst, Tucker, Frank B., 3237 53d Pl., Woodside.

VanDeusen, Clarence R., 221-24 Edmore Ave., Queens Village, Vicente, Elisio F., 9114 Park La., South, Woodhaven, Vogt, Albert C., 3380 165th St., Flushing.

Walker, William H., 199-04 32d Ave., Bayside, Walther, Lee Dr., 2560 33d St., Astoria, Warendorff, Walter P., 4837 64th St., Woodside, Weis, Chester F., 4321 56th St., Woodside, Weiss, Benjamin, 148-45 86th Ave., Jamaica, Wemple, E., Veeder, 146-19 35th Ave., Flushing, Wenman, Oscar F., 4316 164th St., Flushing, Whitehead, Albert C., 119-19 89th Ave., Richmond Hill, Winn, George P., 8408 165th St., Jamaica.

Memorial Roll

Manning J. Butler P.E. 1937
Ernest Jannsen P.E. 1937

[* Under the rules only members whose dues are paid for current or previous year may be carried on the active list.]

OKLAHOMA

Editor's Note: We congratulate the Oklahoma Society of Professional Engineers on its new publication "The Oklahoma Engineer," which will be published quarterly at Tulsa, Oklahoma. It is filled with interesting and valuable information, editorials and data, much of which we will print in our June issue of THE AMERICAN ENGINEER, as our May issue had already gone to press when we received our copy of the Oklahoma publication. Good luck, Oklahoma—you've started out well!

THE OKLAHOMA ENGINEER
OFFICIAL PUBLICATION FOR MEMBERS OF THE OKLAHOMA SOCIETY OF PROFESSIONAL ENGINEERS

Published Quarterly at Tulsa, Oklahoma, by the OKLAHOMA SOCIETY OF PROFESSIONAL ENGINEERS

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PENNSYLVANIA

Pres.—ALEXANDER HUTCHINSON SECTY. THOMAS W. BATTIN

THE PITTSBURGH ENGINEER
PITTSBURGH CHAPTER
PENNSYLVANIA SOCIETY OF PROFESSIONAL ENGINEERS
Issued Monthly by Publications Committee and Chapter Secretary
EARL DWIGHT COVELL, *Chairman* NATHAN LEEBOV, *Vice-Chairman*
Address all communications to Engineer Benjamin H. Aires, Secretary, 610 Maloney Bldg., Pittsburgh.

The Fourth Annual Convention of the National Society of Professional Engineers will be held in Pittsburgh.

Chapter Meeting—The regular meeting of this Chapter was held in Assembly Room, Fort Pitt Hotel, April 21. Speaker: Engr. Robert Hall Craig, Editor-in-Chief, THE AMERICAN ENGINEER. Subject: The Professional Engineer's Opportunity in Pennsylvania. Dinner: Coffee Shop, 6:30 P. M.

New Members—Membership Status

The Chapter welcomes the following addition to its membership:
Engr. Ernest Heckler, 114 Minsinger St., Pittsburgh.
Total Chapter Members: 156. Members Transferred, 0.
Percentage of Registered Engineers of Pittsburgh Area who are Chapter members: about 24 per cent.

Lines and Angles of Chapter Activities

The regular meeting, March 17, was most inspiring. The address by Senator William B. Rodgers was ably delivered and enthusiastically received. His knoweldge of the rivers and flood conditions is that of one who has lived in close contact with them. If other Chapters want a well-informed speaker on flood control the Senator is the answer—if he can be obtained.

A meeting of representatives of the various chapters of *The Pennsylvania Society of Professional Engineers* was called by Engr. Alex Hutchinson, President of the State Society and Engr.

T. W. Battin, Executive Secretary. President Canfield attended the meeting in the Harrisburger Hotel, Harrisburg, Saturday, April 2, as a representative of this Chapter, and reports that a constructive program was adopted looking to the success of the National Convention to be held in Pittsburgh.

Survey of Distant Fields

At the Harrisburg meeting of April 2, heretofore reported, Eng. I. A. Geiger was host at the Hotel. President Canfield is still talking about the good job Engr. Geiger made of it.

State President Hutchinson desires to receive from each Chapter the names of Engineers for membership of State Committees and a list of those who can and will make talks before other chapters.

Comes, now, *The Lehigh Valley Engineer*—"Issued monthly by the Publication Committee, Engr. Hale Sutherland, Chairman, Lehigh Valley Chapter, P.S.P.E. Vol. 1, March, 1938, Number 1," is a gem of brightest ray serene which at once takes leadership in the advancement of the professional status of the engineers of this state. Engr. Frank Nagy is the Editor. Seeking the source of the energy which should produce such a splendid 4-sheet journal, we found it in these words: "The Chapter shows health and vigor of growth ..... We are proud to report that over 60% of the Registered Engineers in our Chapter territory are now Chapter Members." Next—(HARRISBURG?).....

Advice has been received that Dauphin County Court has sustained the Registration Board in the Fraudulent Registration case. We are hoping Engr. Sachs of Philadelphia Chapter will give us a resume of this case so that we can publish the details in a later issue.

Here in Pittsburgh within the last week local police, aided by State police, raided a so-called Medical Institute and arrested one who was allegedly practicing medicine without a license.

When such a procedure is carried out in cases of those who claim to be engineers "practicing or offering to practice the profession of engineering in any of its branches, including surveying, in this Commonwealth, unless such persons have been duly registered or exempted," then, and then only, can the engineering profession in Pennsylvania be said to have arrived at the full dignity of legal consideration to which it is entitled.

Observer's News Notes

Engrs. Greenough and Aiken of Butler have been engaged as Engineers on the construction of the new State Hospital near Butler by the General Contractor for that monumental job. Engr. L. C. D. Greenough expresses interest in becoming a Chapter member and has furnished us the names of four other Butler County Engineers who will be receptive.

The list is as follows: Engr. J. Claude Aiken, Butler, Pa., Engr. Fred M. Harper, Butler, Pa., Engr. S. J. Taylor, Slippery Rock, Pa.. Engr. Paul O. Galer, Harmony, Pa.

Engr. Nathan Leebov has completed a series of six lectures before the Pittsburgh Real Estate Board on "Building, Engineering and Construction." *The Pittsburgh Realtor* reports "Most gratifying results." (E. D. C.)

With regret is reported the death of a Pittsburgh engineer, William Lincoln Eicher. Although, because of his advanced age, Engr. Eicher was not a member of the Chapter, he frequently attended meetings. His interest and counsel will be sadly missed. The Secretary sent an appropriate letter of condolence to the stricken family.

THE AMERICAN ENGINEER is now available at the Carnegie libraries of North Side and Oakland. (Camilli)

Engr. George S. Richardson has completed delivery of a course of six lectures at Carnegie Institute on "Moment Distribution Applied To Continuous Concrete Structures" and allied subjects, under the auspices of The Portland Cement Association. About two hundred engineers took advantage of this opportunity "To keep their information in a constant state of repair." (Arthur R. Lord)

Just In Fun

Out in Montana a Flathead Indian was standing on the curb bewailing that he just couldn't get his saddle-pony fat although he'd fed him everything he could think of. An Irishman, standing by, asked: "Have ye ever tried oats?"

However, no fun, a Chapter can't be fattened without the oats of Cooperation. Have ye tried 'em, pardner? They're mighty potent.

Editorial

THE PAY OF ENGINEERS

Your Chapter has, as one of its major objectives, the following: "To insist upon the proper remuneration of Engineers commensurate with the value of the service rendered the public by members of a learned profession."

One of the popular definitions of an engineer is: "One who can do for one dollar what any 'dub' can do for two."

The engineer is, therefore, an economist "One who manages or expends with economy; uses with prudence." He is one who makes savings.

However, measured by the savings made possible in the practice of a learned profession, in general the engineer is underpaid. This is especially, and almost universally, true of those in the lower ranks.

In comparison, consider this case cited by Alva Johnston in *Woman's Home Companion*, here quoted from *Reader's Digest*, issue of March, 1938, p. 103:

"Jack Dawn, inventor of a new make-up plastic which he calls No. 6, was paid $2,500 for ten hours' work in doing the head and neck work in The Good Earth.... Number 6 saved $150,000 in producing the picture."

Evidently, Jack Dawn is no "dub"; neither is he an engineer, judging by his pay.

It would be interesting to compare the rate of pay of the make-up expert with that of the engineer responsible for the design and construction of The Golden Gate Bridge—for "Doing the head and neck" of that ageless structure.

In recent years, especially in some of the larger cities, some engineers, as well as architects, in the lower grades have affiliated with trade unions in an effort to better their pay. This should not be but, until those professions are militantly aggressive in the protection of their members in proper remuneration, they can but weakly decry this drift from the professional status.

This Society is taking the leadership in insisting on adequate pay for services rendered in making savings for the public. Only by so doing can the seeking of outside aid be stopped and professional standing be preserved.

Incidentally, here is common ground for engineers and architects. To effect their reapproachement is another of this Chapter's objectives—but that is another story.

EARL DWIGHT COVELL

PENNSYLVANIA SOCIETY OF PROFESSIONAL ENGINEERS

The National Society was represented at the State Meeting by the presence of the National Vice-President, Engr. Frederick H. DeChant and the Editor of the AMERICAN ENGINEER, Engr. Robert Hall Craig.

MEMORANDUM FOR THE EXECUTIVE BOARD

At the Harrisburg Conference on April 2d, it was unanimously recommended that compensation be provided for a State Secretary, the amount and person to be determined by the State Executive Board.

To carry out this recommendation, local members of the Board propose the following resolution to be acted upon by the Executive Board:

RESOLVED: That commencing April 1, 1938, and until further notice, the Executive Secretary be compensated at the rate of Twenty Five Dollars per month, payable monthly, provided that the Board may suspend payments and allow same to accumulate if the state of the finances of the Society call for such action; and further, that the present incumbent as Executive Secretary be retained until further notice.

The State Constitution reads as follows:

"ARTICLE VIII, SECTION 6: The Executive Secretary, the Financial Secretary and the Treasurer shall be chosen by a majority of the Executive Board, of which Board they shall be members ex-officio. They shall hold office at the pleasure of the Executive Board."

The By-Laws read as follows:

"ARTICLE III, SECTION 5: He shall receive for his services such salary as the Executive Board shall determine."

Executive Board: Alex. Hutchinson, President, Wm. S. Lohr, 1st Vice-President, H. L. Ramage, 2d Vice-President, Sol. M. Swaab, Past President, Fred H. Dechant, Past President, T. W. Battin, Executive Secretary, W. E. Witte, Financial Secretary, A. A. Townsend, Treasurer, Samuel I. Sacks, Nat'l Director and Phila. Director, Philip E. Stauffer, Director-at-large & Wilkes-Barre Dir., Chester F. Drake, Director-at-large, Robert Hall Craig, Director-at-large, Chas. A. Finley, Pittsburgh Director, A. Judson Warlow, Harrisburg Director, James A. Gish, Jr., Lehigh-Valley Director, Chas. R. Muhlenberg, Reading Director, A. L. Hubbard, Erie Director.

T. W. BATTIN
Executive Secretary

RHODE ISLAND

Pres.—JOHN V. KEILY *Secty.*—CHARLES L. POOL

President John V. Keily and Secretary Charles L. Pool, of the Rhode Island Society of Professional Engineers report that the new Bill for Registration of Professional Engineers has passed the Rhode Island Legislature.

President Arthur V. Sheridan, of the National Society of Professional Engineers, studied the early draft of the Bill and made several suggestions as to strengthening it.

The Rhode Island Engineers are to be congratulated on this forward step and THE AMERICAN ENGINEER urges you to write

or wire the Rhode Island officers, letting them know our Sister State Societies are happy in Rhode Island's progress.

TEXAS

Pres.—W. E. Simpson *Secty.*—R. S. Guinn

THE STATE BOARD OF REGISTRATION REPORTS ON THE LICENSING OF ENGINEERS IN TEXAS

Engineer W. W. Trout, Chairman of the Texas State Board of Registration for Professional Engineers, reported to the Annual Highway Short Course at Texas A. &. M. College on April 14, 1938, that the Board had received more than 11,000 requests for application blanks in the brief period since their organization in the fall of 1937.

To date, 3804 of the applications have been returned to the Board for consideration and 2232 have been approved for licenses. Of these 2232, a total of 1104 have registered their seals and received their license cards.

It is expected that there will be between four and five thousand applications received prior to May 28, 1938, which is the expiration date of the grandfather clause in the Texas law.

A campaign to discourage the illegal use of the title "Engineer" is already underway and is receiving excellent cooperation from the authorities in the various communities.

THE TEXAS ENGINEERS ELECT AN HONORARY LIFE MEMBER

At the annual meeting of the Texas Society of Professional Engineers, Engineers T. U. Taylor's fiftieth year of service as a guide and mentor of young engineers was recognized by presenting him with an honorary life membership in the Society.

The biographical sketch of Dean Taylor's life appeared in Who's Who in the September, 1937 issue of The American Engineer.

WEST VIRGINIA

Pres.—Roy W. Breece *Secty.*—Robert Williamson, Jr.

The fifth annual dinner of the Charleston Chapter, West Virginia Society of Professional Engineers was held recently with His Excellency, Homer A. Holt, Governor of West Virginia, as guest of honor.

Carl Scholz was toastmaster, and the principal speaker was Willard S. Conlon, Executive Secretary of the National Society of Professional Engineers.

Approximately 150 members and guests, headed by Governor and Mrs. Holt, attended the dinner and dance.

Roy W. Breece of Huntington, president of the state society, presided for the business discussion. Attending the board meeting were:

Laurence Meharg of Wheeling, Owen M. Jones of Glen Ferris, L. M. O'Neale and Robert Williamson of Charleston, H. W. Sanders of Coopers, Dr. Davis, a director in the national society, W. S. Downs of Morgantown, J. M. Clark of Charleston, Kyle L. Bruce of Bluefield, L. C. Allen of Parkersburg, Ernest L. Bailey of Charleston, J. E. Settle of Charleston, past state president; Owen M. Jones, chairman of the state board of engineering examiners, and Robert Williams, secretary-treasurer of the state society.

Chapter Officers: Earl H. Morris, President, J. Laurence Stewart, Vice-President, Louis H. Hill, Secretary-Treasurer.

Executive Committee: Earl H. Morris, J. Laurence Stewart, Louis H. Hill, J. R. Blackburn, L. C. Madden.

Unusual Engineering Features of New York World's Fair Discussed by Dr. Alexander Haring

Problems of design and construction explained to Professional Engineers

In an illustrated lecture given at the regular meeting of the Bronx County Chapter of the New York State Society of Professional Engineers in the Concourse Plaza, Grand Concourse, Bronx, April 7, Dr. Alexander Haring showed how engineering problems of tomorrow were surmounted by the engineers engaged in the development of the New York World's Fair.

Dr. Haring, a Director and Past President of the Chapter is an authority on structures and on engineering law and is associated with the Construction Department of the New York World's Fair.

Dr. Haring announced that the New York World's Fair which has as its slogan "The World of Tomorrow" produced problems in engineering not previously encountered. He explained that the fair in addition to being the largest enterprise ever attempted, contained structures of a size and design similarly gigantic.

"The Fair is being erected entirely on reclaimed land" Dr. Haring pointed out, "and at no point on the property is rock encountered. Consequently the foundations of the majority of the structures are on timber or concrete piles, and some of these piles are 100 feet long."

He continued with a description of the various details of design and construction of the pylons, the Perisphere and the Trylon and explained that the design loadings for wind pressure on these structures were tested on small scale models in wind tunnels. A large and enthusiastic audience of Professional Engineers was present to hear Dr. Haring.

The Chapter at the regular business meeting held in conjunction with the discussion, announced the Officers and Committee Chairmen for 1938. They are as follows:

OFFICERS

President—Rudolph C. Lang
Vice-President—Wm. L. A. Arctander
Secretary—H. McKean Conner
Treasurer—Solon E. Friedeberg

STANDING COMMITTEES

Membership—Leo M. Zamory, Chairman
Ethics and Practice—Samuel J. Kessler, Chairman
Legislative—R. J. Smythe, Chairman
Professional Conduct—Alexander Haring, Chairman
Public Relations—Jos. A. Meehan, Chairman
Public Works—Patrick H. Murray, Chairman
Publicity—Charles E. Durr, Jr., Chairman

SPECIAL COMMITTEES

Examining Board—John H. Knight, Chairman
Activities—Raymond C. Sullivan, Chairman
Building Code—A. Slavin, Chairman
Patents—Max B. Miller, Chairman
Unemployment and Age Discrimination—
Walter G. Federlein, Chairman

PROPOSED REVISION OF THE CONSTITUTION OF THE NEW YORK STATE SOCIETY OF PROFESSIONAL ENGINEERS, INC.

Deleted material in brackets thus [ ]
New material in italics

Constitution Revision Committee
Frederick H. Zurmuhlen, Chairman
Joseph F. Lamb

CONSTITUTION OF THE NEW YORK STATE SOCIETY OF PROFESSIONAL ENGINEERS, INC.

PREAMBLE

Concerned with the Public Weal, and
In Order to safeguard life, health, and property, by restricting the practice of Engineering to properly qualified persons;
Likewise, to advance the welfare of the Engineering Profession by the establishment and observance of high ethical standards of conduct, [and through sponsorship of]
And to advocate the creation and enforcement of adequate license laws and practice acts;
Also, to place the control of engineering projects within the scope of such laws and acts;
Further, to focus public attention upon the professional standing, functions, requirements, and accomplishments of engineers;
Withal, to sponsor and promote honorable procedure tending toward emoluments commensurate with the dignity and responsibility of this profession, THE NEW YORK STATE SOCIETY OF PROFESSIONAL ENGINEERS, INC., has been organized; and to such ends the Constitution, of which this preamble is a part; is hereby set forth.

ARTICLE I: NAME

Section 1. This Society shall be known as The New York State Society of Professional Engineers, Inc.
Section 2. The Society shall be Incorporated under the Membership Corporation Laws of the State of New York.
Section 3. This Society is a Charter Member State Society of The National Society of Professional Engineers.

ARTICLE II: MEMBERSHIP

Section 1. The membership shall consist of [Licensed] Professional Engineers *licensed* [of] *by* the State of New York. *Every member of this Society is also a member of the National Society of Professional Engineers.*
Section 2. There shall be one class of membership only.
Section 3. All membership shall be contingent upon, and simultaneous with election to membership in a chartered county chapter; except that a non-resident of New York State, or a resident of a county of this State in which a chartered chapter does not exist, may be elected to membership without chapter affiliation until such time as a chapter is chartered, or as hereinafter provided.

ARTICLE III: CHAPTERS

Section 1. The Society, *through its Executive Board,* [shall] *may* authorize and [register] *charter* one Chapter in each county. Where expedient, [several] *two or more* counties may be combined for the purpose of the organization *of one chapter.*
Section 2. The Executive Board of the State Society shall have authority to grant charters to chapters, provided that Section 3, 4, or 5, and Section 6 of this Article have been complied with, and that nothing in the chapter constitution and by-laws shall conflict with or contravene the Constitution and By-Laws of the State Society.
Section 3. The written petition of five professional engineers [and/or land surveyors] residing or practicing within the limits of any one county; or, where [several] *two or more* counties are combined, shall be deemed sufficient to authorize and [register] *charter* a chapter, [providing, however, the same shall be approved by the Executive Board.]
Section 4. Two or more chartered chapters may merge into one and may be granted a charter, provided that a majority of the membership, in good standing, of each chapter so petition. Upon issuance of the new charter the separate charters of the merged chapters shall be surrendered to the Society.
Section 5. A chartered chapter that comprises two or more counties may divide into two or more separate and distinct chapters to which charters may be granted, provided that a majority of the members thereof, in good standing, residing or practicing in a county desiring a separate charter, so petition. Such majority, however, shall not number less than five, nor shall any chapter resulting from such separation consist of less than five members. The charter of the combined county chapter shall be surrendered to the Society upon issuance of separate charters.
Section 6. Petitioners under Sections 3, 4, or 5 of this Article shall submit a copy of the proposed chapter constitution and by-laws with their petition to the Executive Board. Each chapter *chartered* by the Society [may] *shall* adopt such constitution and by-laws for its internal government as it may deem proper; provided, however, nothing [contained] therein shall conflict with or contravene [this] *the* Constitution [or] *and* [these] By-Laws *of the Society. Chapter Constitutions, By-Laws, and Codes of Practice, or any amendments thereto, shall not become effective until approved by the Executive Board of the Society.*
Section 7. Chapters shall engage in such activities as are consistent with professional ideals and ethics and are conducive to public welfare. Such activities shall be restricted to the county or [District] *counties* [in] *for* which the chapter is located, or where several Chapters may desire to cooperate, to the several counties [or districts] wherein they are located and shall be subject to review, as to propriety, by the Executive Board.
Section 8. [The Secretary or other designated official of each Chapter shall annually, and during the month of March, transmit a list of the members of said Chapter of this Society. The list shall contain the name, residence, position or office and location where each member practises his profession.] *Chapters shall collect, from their respective memberships, all dues and assessments payable to the State Society; and, in addition, may fix and collect such chapter dues as they shall determine necessary for their chapter activities and administration, as provided in chapter constitution and by-laws. It shall be the duty of each chapter to transmit to State Headquarters or to the Society's duly designated officer the following: All State Society and National Society dues, within thirty days after their receipt; the names and addresses of newly elected, expelled, suspended, or deceased members, at once; a report, for publication, of chapter progress and activities, monthly: and the notices of all meetings and elections.*
Section 9. The Chapter shall have exclusive control of its membership both as to admission and expulsion, except as otherwise noted herein.
[Chapters shall conduct investigations, hearings and trials and shall have the authority to expel or reprimand members. The actions of a Chapter in such matters shall not be subject to review or veto by the Executive Board, except upon investigation and recommendation and to the extent herein provided.]
Authority to reprimand members, to suspend from membership temporarily, or to expel from membership shall be vested in the several chapters; provided, however, that in expulsion cases action shall be after approval by the Executive Board of the State Society, Chapters may conduct investigations, hearings, and trials, review of which shall be provided in the By-Laws.
Section 10. Chapters may make recommendations to the Society but shall not propose or introduce legislation affecting the State or districts outside their jurisdiction.
A Chapter intending to present a resolution for a vote at any meeting of the State Society, shall mail copies of such resolution to all other chapters and to State Headquarters, with a synopsis of the subject, at least three weeks prior to the meeting; or to the Resolutions Committee and to State Headquarters at least four weeks prior to the meeting.

ARTICLE IV: HEADQUARTERS

The principal office shall be located in such City or Town of the State as may be selected by the Executive Board [subject to the approval of a majority of the membership voting] and shall be designated as State Headquarters.

ARTICLE V: OFFICERS AND DIRECTORS

The Officers of the Society shall consist of a President, a first Vice-President, a second Vice-President, a Financial Secretary, [and] a Treasurer, *and a Historian.*
There shall be a Board of Directors consisting of the President of each County Chapter, and nine additional Directors-At-Large.
The Officers and Directors, together with the two immediate Past Presidents, shall form the Executive Board of the Society. The President of the Society shall be Chairman of the Executive Board.
There shall be a Board of Trustees composed of all Past Presidents of the State Society which shall elect its own Chairman. Its activities and duties shall be as assigned by the Executive Board.
All Officers *except the Historian* shall be elected annually, and shall hold office for one year, or until their successors are chosen. A majority of all votes cast by ballot shall be necessary for election to any office of this Society. *The Historian shall be appointed by and shall hold office at the pleasure of the President.*
There shall be an Executive Secretary who shall be chosen by a majority vote of the Officers and Directors. He shall hold office at the pleasure of the Executive Board,

and compensation for his services shall be set by the Executive Board.

The Chapter President members of the Board of Directors shall be duly elected to office as directors upon certification as to their election as Chapter Presidents.

The Directors-at-large shall be elected in the same manner as the Officers of the Society.

For the year beginning June 1, 1937, the Directors-at-large shall be chosen for one year only. Subsequent thereto and beginning June 1, 1938, the Directors-at-large shall be divided into three groups of three each. The first group *consisting of Directors-at-large from Zones 7-8 and 9* shall be elected for a period of one-year; the second *group consisting of Directors-at-large from Zones 4-5 and 6,* for a period of two years; and the third group *consisting of Directors-at-large from Zones 1-2 and 3,* for a period of three years. At each annual election beginning June 1, 1939, there shall be elected three Directors-at-large to hold office for a term of three years.

[The terms of office of the present Directors, which, by reason of the adoption of the amended Article, shall terminate on June 1, 1938.]

In order that the Directors-at-large shall represent as far as practicable, the different portions of the State, they shall be selected from, and in number as indicated in the following zones:

Zone No. 1—One Director-at-large
- Richmond County
- Kings County

Zone No. 2—One Director-at-large
- Queens County
- Nassau County
- Suffolk County

Zone No. 3—One Director-at-large
- New York County
- Bronx County

Zone No. 4—One Director-at-large
- Westchester County
- Putnam County
- Orange County
- Rockland County
- Dutchess County
- Ulster County

Zone No. 5—One Director-at-large
- Columbia County
- Albany County
- Schenectady County
- Montgomery County
- Saratoga County
- Greene County
- Rensselaer County
- [Schoharie County]
- Fulton County

Zone No. 6—One Director-at-large
- Washington County
- Essex County
- Franklin County
- Warren County
- Clinton County
- Hamilton County
- St. Lawrence County
- Jefferson County
- Lewis County

Zone No. 7—One Director-at-large
- Oswego County
- Herkimer County
- Onondaga County
- Wayne County
- Oneida County
- Madison County
- Cayuga County
- Seneca County

Zone No. 8—One Director-at-large
- Sullivan County
- Delaware County
- Otsego County
- Chenango County
- Broome County
- Cortland County
- Tompkins County
- Tioga County
- Chemung County
- Schuyler County
- Yates County
- Steuben County
- Allegany County
- Cattaraugus County
- Chautauqua County
- *Schoharie County*

Zone No. 9—One Director-at-large
- Niagara County
- Orleans County
- Wyoming County
- Livingston County
- Erie County
- Genesee County
- Ontario County
- Monroe County

Where Directors whose terms have not expired are nominated as Officers such Directorships shall be considered vacant for the period of incumbency of office, and Directors may be elected for the current year. If the incumbent so affected is a Chapter President, the right to elect his successor shall be limited to the members in good standing of his Chapter. If the incumbent so affected is a Director-at-large, the vacant office shall be filled by election as provided for hereinbefore.

The nomination of Officers and Directors-at-large shall be made by a nominating committee of five members. The nominating committee shall be nominated and elected by the members present at the last regular meeting of the Society preceding the election.

Nominations other than those of the Committee shall be in order at all times, and if supported by the written request of 15% of the membership, shall be printed on the official ballot.

Upon the death, resignation or removal of any Officer or Director, it shall be the duty of the presiding Officer to order and conduct a Special Election to fill the vacancy, unless the same occurs in the last half year prior to the annual election, in which case, the Executive Board by majority vote may fill the vacancy for the unexpired term.

ARTICLE [5-A]—*6*—ELECTIONS

At least three weeks prior to the annual meeting, the nominating committee shall notify the Executive Secretary of the names of the candidates selected, and the Executive Secretary shall mail to each member in good standing, at least two weeks before the annual meeting, a letter ballot upon which the names of the members nominated will appear with blank spaces opposite each office for independent vote. The members nominated for offices receiving the highest number of votes shall be declared elected at the annual meeting.

The three members nominated for each class of Directors-at-large receiving the highest number of votes shall be declared elected Directors-at-large in their respective classes.

ARTICLE [5-B]—*7*—VOTING REPRESENTATION AT MEETINGS

Voting representation at all meetings of the State Society shall be limited to duly accredited representatives from each of the chartered Chapters of the Society. The basis of voting representation of each Chapter shall be as follows:

Each chartered Chapter with a membership in good standing of from five to fifty shall be entitled to three votes. For each additional fifty, or majority fraction thereof, members in good standing, a chartered Chapter shall be entitled to one additional vote.

The election or appointment of the voting delegates from a Chapter shall be in accordance with the provisions of the individual Chapters' constitution and by-laws, as adopted by the Chapter and approved of by the Executive Board, as hereinbefore provided.

Each voting delegate shall present to the Executive Secretary at a specified time before each meeting of the Society, his credentials for inspection and approval.

Chapters may, at their discretion, authorize one or more of their members to cast all or part of the votes that the Chapter is entitled to. Voting delegates however must be members of the respective Chapters for whom they are authorized to vote.

ARTICLE [6]—*8*—COMMITTEES

There shall be four standing committees, namely:

Membership, Publicity, Legislative and Grievance, and Ethics and Professional Practice, the activities of which are subject to the approval of the Executive Board.

The standing committees shall, except as hereinafter specified consist of not less than three nor more than five members. Whenever the duties and scope of any committee warrant the same, the President shall upon the request of the said committee or the Executive Board, be empowered to increase such committee to desired proportions.

The Chairman and members of standing committees shall be appointed by the President for a period of one year and shall be designated within one month of the election of the President.

ARTICLE [7]—*9*—AMENDMENTS

This Constitution may be amended by letter ballot, provided, however, that such amendment has been presented to the Executive Board in writing and that a majority of the Executive Board having approved of the amendment it shall have been submitted to the Society for decision at least twenty days prior to the date of the next ensuing regular or special meeting. A two-thirds approval, with not less than 20% of the membership voting shall be required to amend this Constitution or any part thereof.

AMENDMENT TO THE BY-LAWS NEW YORK STATE SOCIETY OF PROFESSIONAL ENGINEERS, INC.

To Article 3—OFFICERS—add the following:

Section 6—Historian.

It shall be the duty of the Historian to prepare and keep up-to-date a complete historical record of the Society's aims, activities and accomplishments. He shall keep in close contact with the chapters of the Society, recording accurately the results of their activities and their influence on the profession. His writings after submission to and approval of the Executive Board shall be preserved as a permanent record of the Society and shall be turned over in proper condition to his successor. All records of the Historian shall be available to standing committees of the Society and to the Chapters subject to rules and regulations adopted by the Executive Board.

Rhode Island Has Engineering Registration Law

Introduced by Representative John E. Meade, Vice President, Rhode Island Society of Professional Engineers. Passed by House of Representatives April 5, 1938. Passed by Senate April 21, 1938 Signed by Governor Robert E. Quinn, April 23, 1938

An Act to Regulate the Practices of Professional Engineering and Land Surveying; Creating a State Board of Registration for Professional Engineers and Land Surveyors; Defining Its Powers and Duties; Imposing Certain Duties Upon the State and Political Sub-Divisions Thereof in Connection with Public Work; and Providing Penalties.

It is enacted by the General Assembly as follows:

SECTION 1. *General Provisions.* In order to safeguard life, health, and property, any person practicing or offering to practice professional engineering or land surveying, shall hereafter be required to submit evidence that he is qualified so to practice and shall be registered as hereinafter provided; and it shall be unlawful for any person to practice or to offer to practice in this state, professional engineering or land surveying, as defined in the provisions of this act, or to use in connection with his name or otherwise assume, use or advertise any title or description tending to convey the impression that he is a professional engineer or a land surveyor, unless such person has been duly registered under the provisions of this act.

SEC. 2. *Engineer.* The term "engineer" as used in this act shall mean a professional engineer as hereinafter defined.

Professional Engineer. The term "professional engineer" as used in this act shall mean a person who is qualified by reason of his knowledge of mathematics, the physical sciences, and the principles of engineering, acquired by professional education and practical experience, to engage in the practice of professional engineering as hereinafter defined.

Engineering. The term "engineering" as used in this act shall mean professional engineering as hereinafter defined.

Professional Engineering. The practice of "professional engineering" within the meaning and intent of this act includes any professional service, such as consultation, investigation, evaluation, planning, design, or responsible supervision of construction or operation, in connection with any public or private utilities, structures, buildings, machines, equipment, processes, works or projects, wherein the public welfare, or the safeguarding of life, health or property is concerned or involved, when such professional service requires the application of engineering principles and data.

Practice in Rhode Island. The practice of "professional engineering in Rhode Island" is hereby defined to include all professional services defined under "Professional Engineering" above, on any project within the boundaries of this state, regardless of whether the persons engaged in such practice are residents of Rhode Island or have their principal office or place of business in this or any other state or country, and regardless of whether such persons are performing one or all of those duties, or whether they are performed in person or as the directing head of an office or organization performing them; *provided, however,* the provisions of this act shall not include the services ordinarily performed by those commonly designated as locomotive, stationary, marine or power plant operating engineers who operate cranes, power shovels or any of the devices operated by hoisting and portable engineers, or by any workman regularly employed as an operating engineer by any corporation, contractor or employer, nor shall anything in this act be construed to prevent any owner or contractor for said owner, from making minor alterations to his property or adding new construction of a minor character.

Land Surveyor. The term "land surveyor" as used in this act shall mean a person who engages in the practice of land surveying as hereinafter defined.

Land Surveying. The practice of "land surveying" within the meaning and intent of this act includes responsible supervision of surveying of areas for their correct determination and description and for conveyancing, or for the establishment or re-establishment of land boundaries and the plotting of lands and subdivisions thereof.

Nothing in this act shall be construed to prevent a registered professional engineer from engaging in the practice of land surveying.

Board. The term "board" as used in this act shall mean the state board of registration for professional engineers and land surveyors, provided for by this act.

SEC. 3. *Board—Appointments—Terms.* A state board of registration for professional engineers and land surveyors is hereby created whose duty it shall be to administer the provisions of this act. The board shall consist of five professional engineers, who shall be appointed by the governor from among nominees recommended by the engineering societies already incorporated in the state of Rhode Island and local sections of national engineering societies and shall have the qualifications required by section 4 of this act. The members of the first board shall be appointed within thirty days after the passage of this act, to serve for the following terms: One member for one year, one member for two years, one member for three years, one member for four years, and one member for five years, from the date of their appointment and until their successors are duly appointed and qualified. Every member of the board shall receive a certificate of his appointment from the governor and before beginning his term of office shall file with the secretary of state his written oath or affirmation for the faithful discharge of his official duty. Each member of the board first appointed hereunder shall receive a certificate of registration under this act from said board. On the expiration of the term of any member, the governor, from among nominees recommended by the representative engineering societies of the state, shall appoint for a term of five years a registered professional engineer, having the qualifications required by section 4 of this act, to take the place of the member whose term on said board is about to expire. Each member shall hold office until the expiration of the term for which such member is appointed and until a successor shall have been duly appointed and shall have qualified.

SEC. 4. *Board—Qualifications.* Each member of the board shall be a citizen of the United States and a qualified elector of this state, and shall have been engaged in the practice of the profession of engineering for at least twelve years, and shall have been in responsible charge of important engineering work for at least five years. Such responsible charge wherever used in this act is defined as the exercise of independent engineering judgment in the practice of professional engineering. Responsible charge of engineering teaching may be construed as responsible charge of important engineering work.

SEC. 5. *Board—Compensation and Expenses.* Each member of the board shall serve without compensation, and shall be reimbursed for all actual traveling, incidental, and clerical expenses necessarily incurred in carrying out the provisions of this act, from any sums appropriated therefor.

SEC. 6. *Board—Removal of Members—Vacancies.* The governor may remove any member of the board for misconduct, incompetency, neglect of duty, or for any other sufficient cause. Vacancies in the membership of the board shall be filled for the unexpired term by appointment by the governor as provided in section 3 of this act.

SEC. 7. *Board—Organization and Meetings.* The board shall hold a meeting within thirty days after its members are first appointed, and thereafter shall hold at least two regular meetings each year. Special meetings shall be held at such time as the by-laws of the board may provide. Notice of all meetings shall be given in such manner as the by-laws may provide. The board shall elect or appoint annually the following officers: a chairman, a vice-chairman, and a secretary. A quorum of the board shall consist of not less than three members.

SEC. 8. *Board Powers.* The board shall have the power to adopt and amend all by-laws and rules of procedure, not inconsistent with the constitution and laws of this state, or of the United States, which may be reasonably necessary for the proper performance of its duties and the regulations of the proceedings before it. The board shall adopt and have an official seal.

In carrying into effect the provisions of this act, the board, under the hand of its chairman and the seal of the board, may subpoena witnesses and compel their attendance, and also may require the production of books, papers, documents, etc., in any case involving the revocation of registration or practicing or offering to practice without registration. Any member of the board may administer oaths or affirmations to witnesses appearing before the board. If any person shall refuse to obey any subpoena so issued, or shall refuse to testify or produce any books, papers, or documents, the board may present its petition to any justice of the superior court, setting forth the facts, and thereupon such justice shall, in a proper case, issue its subpoena to such person, requiring his attendance before such court and there to testify or to produce such books, papers, and documents, as may be deemed necessary and pertinent by the board. Any person failing or refusing to obey the subpoena or order of the said court may be proceeded against in the same manner as for refusal to obey any other subpoena or order of said court.

SEC. 9. *Receipts and Disbursements.* The secretary of the board shall receive and account for all moneys derived under the provisions of this act, and shall pay the same monthly into the general treasury. The secretary of the board shall give a surety bond to the state in such sum as the board may determine.

(Continued in June issue)

PROFESSIONAL DIRECTORY

F. HERBERT SNOW
Consulting Engineer
Telegraph Bldg. Harrisburg, Penna.

Robert Hall Craig
Consulting Engineer
Public Utility » Industrial » Municipal
Design » Finance
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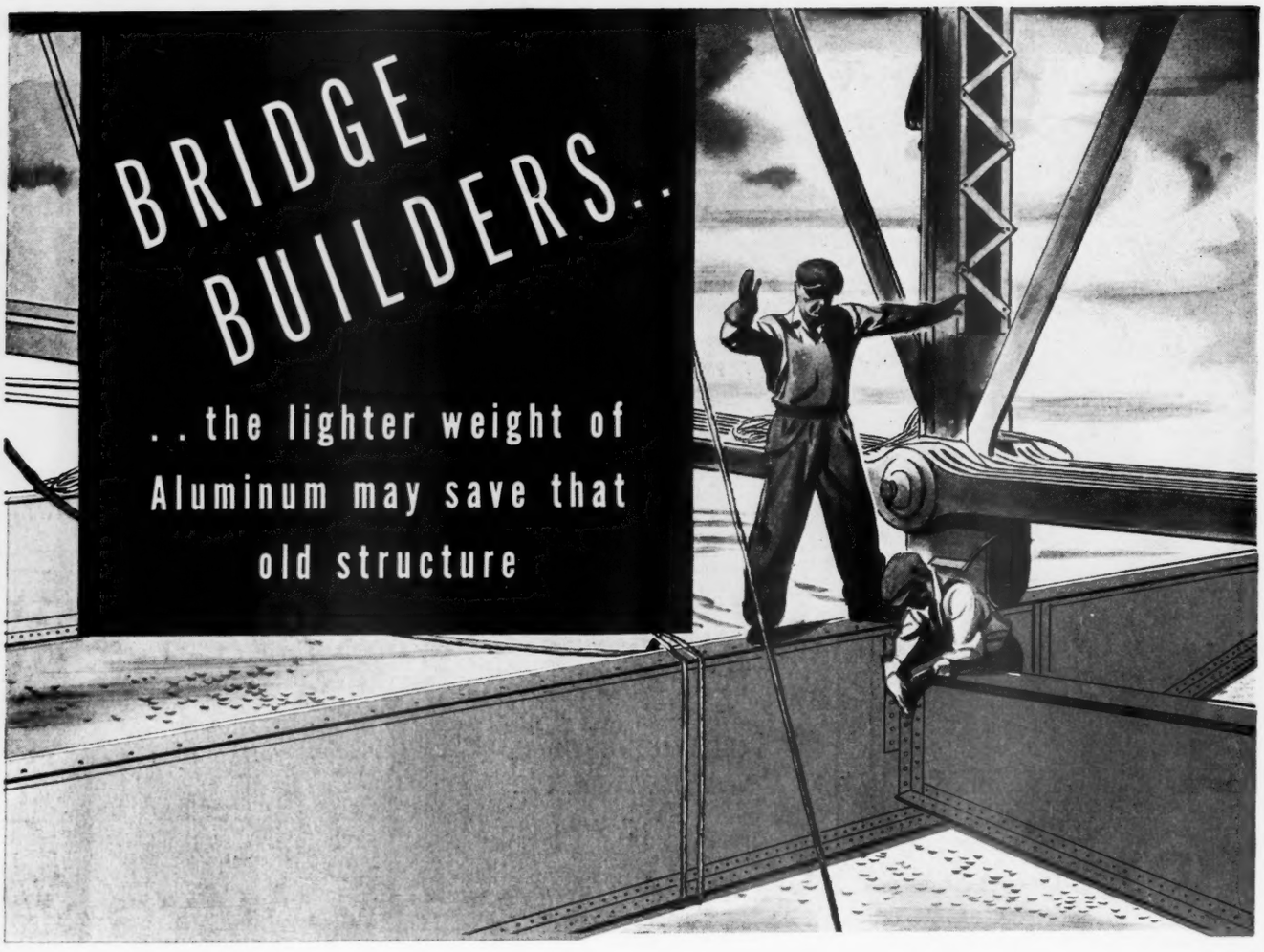

There's nothing startling about the suggestion that dead weight be reduced so that greater live load can be carried. That's being done every day in the transportation industry. Buses, trucks, trains, and airplanes are made light in weight, principally through the use of Alloys of Alcoa Aluminum, to permit them to carry larger payloads.

Likewise, Aluminum is being employed in the reconstruction of old, overloaded bridges so that they can be made to meet modern requirements. The lighter weight of Aluminum in many of the supported members permits the widening of roadways and addition of walkways without reduction in safety of the structure. Thus, at a small percentage of the cost of a new bridge, the old one is made good for many years of additional service.

On new bridges, particularly where spans are long, the use of Aluminum offers great possibilities for saving on first costs. Floor systems designed to take full advantage of the weight-saving property of Alcoa Aluminum Alloys, should result in sizable savings on piers and supporting members.

Data on the use of Aluminum in bridge construction, and the services of our engineers, are available to any bridge builder who wishes to learn how he can employ Aluminum to advantage. ALUMINUM COMPANY OF AMERICA, 2112 Gulf Building, Pittsburgh, Pennsylvania.

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